LISTING OF ACTIVE FORESTRY AND RANGE-RELATED RESEARCH PROJECTS IN BRITISH COLUMBIA

Prepared by

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FOREWORD

This inventory has been compiled to provide a consolidated listing of forestry-related research projects now active in the Province. It is stored on a word-processor so that up-dating or correction is straightforward and partial lists can readily be extracted: for example, we can extract all Douglas-fir projects, or all projects in a geographical area, or all entomological projects, and so on.

This inventory is arranged in two Parts. The first lists research projects or experiments; the second lists observational trials and recording of data. In Part I projects are arranged in chronological sequence from seed to finished product. Ecology is considered as a component of the initial wood fibre section which is followed by sections on non-timber uses - range, wildlife, fisheries and recreation. Coding in Part II is a simplified version.

The identification codes allow for unlimited sub-division as appropriate.

I am very grateful to all the contributors and respondents who have been so generous with their time in helping compile the inventory.

R.M. Strang
Executive Director

PART I: Experimental Projects

FORESTRY DISCIPLINE OR AREA SUBDIVISION CODE

1.0.0.0 TIMBER, WOOD FIBRE PRODUCTION

- 1.1.0.0 Seed production and genetics
  - 1.1.1.0 Plus trees, selection of
    - 1.1.1.1 location of
  - 1.1.2.0 Seed tree physiology
  - 1.1.3.0 Propagation technology, grafting, rooting
  - 1.1.4.0 Seed production, cone production
  - 1.1.5.0 Seed extraction and storage
  - 1.1.6.0 Provenance testing and progeny testing
  - 1.1.7.0 Pollen studies
    - 1.1.7.1 identification
    - 1.1.7.2 storage
  - 1.1.8.0 Tree breeding
- 1.2.0.0 Nursery practice
  - 1.2.1.0 Beds, bare-root nurseries
  - 1.2.2.0 Containers, container nurseries
  - 1.2.3.0 Substrate
  - 1.2.4.0 Seeding and seedlings
    - 1.2.4.1 seeding rates
    - 1.2.4.2 germination
    - 1.2.4.3 growth and development
  - 1.2.5.0 Transplanting and espacement
  - 1.2.6.0 Root pruning
  - 1.2.7.0 Weeding
  - 1.2.8.0 Lifting and storing
- 1.3.0.0 Reforestation
  - 1.3.1.0 Site preparation
    - 1.3.1.1 mechanical
    - 1.3.1.2 by fire
  - 1.3.2.0 Seeding
    - 1.3.2.1 natural
    - 1.3.2.2 artificial
  - 1.3.3.0 Planting, Artificial Regeneration
    - 1.3.3.1 manual
    - 1.3.3.2 mechanical
    - 1.3.3.3 espacement
    - 1.3.3.4 physiology
    - 1.3.3.5 comparisons
  - 1.3.4.0 Choice of species

1.4.0.0 Tending

- 1.4.1.0 Weeding and cleaning
- 1.4.2.0 Juvenile spacing
- 1.4.3.0 Thinning
- 1.4.4.0 Pruning
- 1.4.5.0 Protecting
  - 1.4.5.1 animals except man
  - 1.4.5.2 man
  - 1.4.5.3 fire
  - 1.4.5.4 insects
  - 1.4.5.5 disease
- 1.4.6.0 Fertilizing
  - 1.4.6.1 biological N fixation
- 1.4.7.0 Tree physiology
  - 1.4.7.1 cone production
- 1.4.8.0 Tree nutrition
  - 1.4.8.1 foliar analysis

1.5.0.0 Mensuration

- 1.5.1.0 Ground techniques
- 1.5.2.0 Photogrammetry and Remote Sensing
- 1.5.3.0 Dendrochronology

1.6.0.0 Felling

- 1.6.1.0 Clear-felling
  - 1.6.1.1 techniques
  - 1.6.1.2 impact on regeneration
  - 1.6.1.3 impact on habitat
  - 1.6.1.4 wastage and loss
- 1.6.2.0 Shelterwoods
  - 1.6.2.1 techniques
  - 1.6.2.2 impact on regeneration
  - 1.6.2.3 impact on habitat
- 1.6.3.0 Selection system
  - 1.6.3.1 techniques
  - 1.6.3.2 impact on region
  - 1.6.3.3 impact on habitat

1.7.0.0 Extracting

- 1.7.1.0 Techniques
- 1.7.2.0 Effects on regneration
- 1.7.3.0 Accessibility

1.8.0.0 Transporting

- 1.8.1.0 By road
- 1.8.2.0 By water
- 1.8.3.0 Other
  - 1.8.3.1 balloon
  - 1.8.3.2 helicopter
  - 1.8.3.3 skycrane

1.9.0.0 Processing

- 1.9.1.0 Lumber
- 1.9.2.0 Plywood and veneers
  - 1.9.2.1 adhesives
- 1.9.3.0 Pulpwood
- 1.9.4.0 Particleboard
- 1.9.5.0 Other
  - 1.9.5.1 poles
  - 1.9.5.2 Christmas trees
  - 1.9.5.3 fuel
  - 1.9.5.4 hardwoods
  - 1.9.5.5 shakes and shingles
- 1.9.6.0 Chemistry
- 1.9.7.0 Energy
- 1.9.8.0 Other
- 1.9.9.0 Preservatives
- 1.9.10.0 Health & Safety

1.10.0.0 Ecology

- 1.10.1.0 Processes and succession, forest dynamics
- 1.10.2.0 Mapping and/or description

2.0.0.0 RANGE

- 2.1.0.0 Animal management
- 2.2.0.0 Habitat management
  - 2.2.1.0 By fire
  - 2.2.2.0 By seeding
    - 2.2.2.1 open range
    - 2.2.2.2 clear cuts
  - 2.2.3.0 Weed Control
  - 2.2.4.0 Poisonous spp.
  - 2.2.5.0 Plant physiology
- 2.3.0.0 Stand modification
- 2.4.0.0 Tree and grass interaction
- 2.5.0.0 Fertilizing
- 2.6.0.0 Inventory

3.0.0.0 WILDLIFE

- 3.1.0.0 Animal management
  - 3.1.1.0 Census
  - 3.1.2.0 Productivity
  - 3.1.3.0 Foraging habits
  - 3.1.4.0 Biology
- 3.2.0.0 Habitat management
  - 3.2.1.0 Inventory
  - 3.2.2.0 By fire
  - 3.2.3.0 Other

4.0.0.0 FISHERIES AND HYDROLOGY

- 4.1.0.0 Fish stocks
  - 4.1.1.0 Inventory
  - 4.1.2.0 Productivity
- 4.2.0.0 Habitat management
  - 4.2.1.0 Water quality
  - 4.2.2.0 Water yield

5.0.0.0 RECREATIONAL USES OF FOREST LAND

6.0.0.0 REHABILITATION OF DISTURBED LANDS

7.0.0.0 ECONOMIC IMPLICATIONS OF FOREST MANAGEMENT POLICIES

APPENDIX 1 - B.C.F.S. SILVICULTURE BRANCH PROJECTS

- Appendix 1A - Cones & seeds
- Appendix 1B - Nursery practice
- Appendix 1C - Reforestation
- Appendix 1D - Stand tending

APPENDIX 2 - LIST OF PARTICIPATING ORGANIZATIONS

IDENTIFICATION CODES FOR TREE SPECIES

western red Cedar	Cw
yellow Cedar	Yc
true Fir	B
Douglas-fir	Fd
Hemlock	H
Larch - western	Lw
Pine - lodgepole	Pl
- Ponderosa - yellow	Py
- white	Pw
Spruce - black	Sb
- Englemann	Se
- Sitka	Ss
- white	Sw
Subalpine fir	B
Poplar - aspen	At
- black, balsam	Ac
Birch	Ep
Alder	Dr
Other	O

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
.1.2.0		MINERAL NUTRITION OF SEED ORCHARD TREES (E.P. 918) INCLUDES 3 STUDIES	Victoria	Ministry of Forests Research Branch - R. van den Driessche	As in title
.1.2.0		SEED ORCHARD CROWN MANAGEMENT (E.P. 944) INCLUDES 4 STUDIES	Lost Lake, Dewdney, South Quinsom Seed Orchards	Ministry of Forests Research Branch - S.D. Ross	As in title
.1.3.0	Fd	GRAFTING IN DOUGLAS-FIR (E.P. 648)	Cowichan Lake	Ministry of Forests Research Branch - S.A.I. Karlsson	To test compatibility and subsequent growth and development
.1.3.0	Ss, Sw	VEGETATIVE REPRODUCTION IN SPRUCE (E.P. 667) INCLUDES 12 STUDIES	Victoria	Ministry of Forests Research Branch - R. van den Driessche	As in title
.1.3.0	Pl	PROPAGATION AND EVALUATION OF LODGEPOLE PINE BREEDING MATERIAL (E.P. 699)	Victoria	Ministry of Forests Research Branch - C.C. Ying	As in title
.1.3.0	Yc	YELLOW CEDAR PLANTATION AT COWICHAN LAKE RESEARCH STATION (E.P. 750) INCLUDES 3 STUDIES	Cowichan Lake, Mission, Mt.Elphin. plantations	Ministry of Forests Research Branch - S.A.I. Karlsson	As in title
.1.3.0		IMPROVING CULTURAL TECHNIQUES FOR THE PROPAGATION OF NORTHWEST CONIFERS (E.P. 948)	Victoria	Ministry of Forests Research Branch - A.M. Wood	As in title
.1.3.0	Fd, Pl, Sw, Ye	PROPAGATION OF CONIFEROUS TREES BY TISSUE CULTURING	Vancouver	Canadian Forest Products - D.E. Rickson	To develop an economically viable tissue culturing technique for conifers
.1.3.0	Fd	EVALUATION OF CONE PRODUCTION FROM ROOT PRUNING IN COASTAL DOUGLAS-FIR SEED ORCHARDS (SX 79302Q)		Ministry of Forests Silviculture Branch	As in title
.1.3.0	Fd	SOIL WATER POTENTIALS IN DOUGLAS-FIR SEED ORCHARDS (SX 79303Q)		Ministry of Forests Silviculture Branch	To ascertain most productive conditions for cone yields

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.4.0	S	CONE CROP PERIODICITY IN SPRUCE (E.P. 618)	Nelson Forest Region	Ministry of Forests Research Branch - C.F. Thompson	As in title
1.1.4.0	H	CONE INITIATION AND SEED DEVELOPMENT IN MOUNTAIN HEMLOCK (E.P. 738)	Victoria	Ministry of Forests Research Branch - J.N. Owens	To determine developmental anatomy of the species
1.1.4.0	Pl	PHOTOPERIOD EXTENSION FOR GROWTH ACCELERATION AND FLOWER PROMOTION IN LODGEPOLE PINE (E.P. 771)	Victoria	Ministry of Forests Research Branch - M. Carlson	As in title
1.1.4.0	Fd	FLOWER STIMULATION IN DOUGLAS-FIR (E.P. 780) INCLUDES 3 STUDIES	Victoria	Ministry of Forests Research Branch - I. Karlsson	As in title
1.1.4.0		ENHANCEMENT OF CONE PRODUCTION IN SEED ORCHARDS (E.P. 799) INCLUDES 3 STUDIES	Victoria	Ministry of Forests Research Branch - J.E. Webber	As in title
1.1.4.0	Fd	SUPPLEMENTAL POLLINATION IN DOUGLAS-FIR SEED ORCHARDS (E.P. 821)		Ministry of Forests Research Branch - J.E. Webber	To determine if seed yield can be enhanced by augmenting pollen supply
1.1.4.0	Pl	SEXUAL REPRODUCTION IN Pinus contorta (E.P. 830)	Victoria	Ministry of Forests Research Branch - J. N. Owens	As in title
1.1.4.0	B	CONE INITIATION AND SEED DEVELOPMENT IN Abies spp. (E.P. 832) INCLUDES 3 STUDIES		Ministry of Forests Research Branch - J.N. Owens	As in title
1.1.4.0		ACCELERATED GROWTH OF SEEDLINGS TO INDUCE EARLY AND ABUNDANT CONE PRODUCTION (E.P. 851)	Vernon & Saanich	Ministry of Forests Research Branch - J.E. Webber	As in title
1.1.4.0	Se	CONE INITIATION AND SEXUAL REPRODUCTION OF Picea engelmannii (E.P. 900)		Ministry of Forests Research Branch - J.N. Owens	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.4.0	Pl	INVESTIGATION OF SITE EFFECTS ON LODGEPOLE PINE FLOWERING (E.P. 907)	Victoria	Ministry of Forests Research Branch - M. Carlson, J. Webber	Effect of site and stock type on early flowering of lodgepole pine
1.1.4.0		HORMONE TREATMENT METHODS AND REGIMES FOR SEED TREES (E.P. 935)	Victoria	Ministry of Forests Research Branch - S.D. Ross	To develop systems for improved uptake of flower-inducing hormones
1.1.4.0		HORTICULTURE OF CONTAINERIZED SEED ORCHARD TREES (E.P. 961)	Victoria	Ministry of Forests Research Branch - A.M. Eastham	Monitoring plant water status for potted hemlock and spruce
1.1.4.0	Fd	TREE IMPROVEMENT AND MANAGEMENT OF DOUGLAS-FIR SEED ORCHARDS	Vancouver Island	Pacific Forest Products - A.M.K. Fashler	To improve seed orchard management; to produce genetically-improved seed; to test progeny
1.1.4.0	Yc	YELLOW CYPRESS CONE INDUCTION TRIAL	East Vancouver Island	MacMillan Bloedel - B.G. Dunsworth	Determine effect. of exogenous applications of GA3 on yellow cypress in producing seed cones
1.1.4.0		STUDIES OF VEGETATIVE BUD DEVELOPMENT AND THE TIME OF CONE INITIATION IN NATIVE B.C. CONIFERS	U. Vic	University of Victoria - J. N. Owens, Biology	To understand cyclic cone production and determine when to try cone induction technique
1.1.4.0	Fd, H, Pl, Ss	POLLINATION MECHANISM AND THE OPTIMAL TIME OF POLLINATION FOR MAXIMUM SEED SET IN CONIFERS	U. Vic	University of Victoria - J.N. Owens, Biology	To increase seed production in seed orchards
1.1.4.0		ULTRA-STRUCTURAL STUDIES OF REPRODUCTIVE DEVELOPMENT IN CONIFERS	Victoria	University of Victoria - J.N. Owens	To study the ultra-structure of pollen germination, pollen tube development, fertilization & early embryo develop.
1.1.4.0	Fd	THE RELATIONSHIP OF ANATOMICAL AND BIOCHEMICAL CHANGES OCCURRING IN TREES BEING TREATED (ROOT PRUNING, GIBBERELLIN) TO INDUCE CONE PRODUCTION	U. Vic/U. Calgary	University of Victoria /University of Calgary - J.N.Owens, R.P. Pharis	To compare changes within the tree under natural and cone-inducing conditions and optimal time of treatment
1.1.4.0	Fd	DOUGLAS-FIR SEED ORCHARD MANAGEMENT: SEED HARVEST, FLOWER INDUCTION BY ROOT PRUNING, INSECT CONTROL, POLLEN BOOSTING, SOIL DATA COLLECTION	Vancouver Island	Ministry of Forests Silviculture Branch	Production of 7 million plantable seedlings

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.4.0	Sb, Se, Sw	SPRUCE & WHITE PINE SEED ORCHARD MANAGEMENT: POLLEN BOOSTING, WEED CONTROL, INSECT CONTROL, FERTILIZER EFFECTS, GROWTH ENHANCEMENT, PLUS TREES	Vernon & Skimikin	Ministry of Forests Silviculture Branch	Production of plantable seedlings
1.1.4.0	Pl, Sb, Se	LODGEPOLE PINE AND SPRUCE SEED ORCHARD MANAGEMENT: POLLEN BOOSTING, FERTILIZER EFFECTS, GROWTH ENHANCEMENT, INSECT CONTROL, PLUS TREES	Red Rock Nursery, Prince George	Ministry of Forests Silviculture Branch	As in title
1.1.5.0		QUICK TESTS TO DETERMINE SEED QUALITY (E.P. 838)	Victoria	Ministry of Forests Research Branch - C. Leadem	To evaluate quick alternatives to conventional germination testing
1.1.5.0	B	SEED SIZING AND SORTING (E.P. 843) INCLUDES 2 STUDIES	Victoria	Ministry of Forests Research Branch - C. Leadem	To determine size range and vigour of screened fractions; separation of Abies amabilis seed by screen. & aspiration
1.1.5.0	B	IMPROVING THE SEED PERFORMANCE OF Abies spp. (E.P. 848)	Victoria	Ministry of Forests Research Branch - C. Leadem	To improve germination of A. amabilis seed
1.1.5.0		EFFECTS OF CONE STORAGE ON SEED VIABILITY (E.P. 873)	Victoria	Ministry of Forests Research Branch - C. Leadem	To ascertain optimal storage conditions to minimize loss of viability
1.1.5.0		MONITORING CONE AND SEED PERFORMANCE (E.P. 874) INCLUDES 5 STUDIES	Victoria	Ministry of Forests Research Branch - C. Leadem	As in title
1.1.5.0		CONE AND SEED TECHNOLOGY DEVELOPMENT (E.P. 940) INCLUDES 4 STUDIES	Victoria	Ministry of Forests Research Branch - C. Leadem	As in title
1.1.6.0	Fd	COASTAL DOUGLAS FIR PROVENANCE STUDY (E.P. 599) INCLUDES 4 STUDIES	Victoria	Ministry of Forests Research Branch - C.C. Ying	As in title
1.1.6.0		TRIAL OF SPECIES AND PROVENANCES (E.P. 611)	Drury Inlet	Ministry of Forests Research Branch - C.C. Ying	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.6.0	Fd	DOUGLAS-FIR PROVENANCE STUDY IN THE PACIFIC NORTHWEST (F.628)	16 sites B.C. to N. California	Ministry of Forests, UBC, CZ, Canfor, M&B & U.S. co-operators	To compare growth performance of a range of provenances (co-ordinator - Oregon State University)
1.1.6.0	Se, Sw	EFFECTS OF ALTITUDINAL AND LATITUDINAL DISPLACEMENTS OF WHITE AND ENGELMANN SPRUCE PROVENANCES (E.P. 646)	Prince George	Ministry of Forests Research Branch - G.K. Kiss	As in title
1.1.6.0	Pl	LODGEPOLE PINE PROVENANCE TRIALS (E.P. 657)	60 interior sites	Ministry of Forests Research Branch - C.C. Ying	To compare and contrast 153 lodgepole pine provenances on a range of sites
1.1.6.0	Se	AN ALTITUDINAL TEST OF A LOW ELEVATION SEED SOURCE OF ENGLEMANN SPRUCE (E.P. 662)	Larch Hills, McGillvary Lake	Ministry of Forests Research Branch - M.B. Clark	Comparison of one low elevation strain with 3 high elevation strains
1.1.6.0	Se, Sw	EFFECTS OF ALTITUDINAL AND LATITUDINAL DISPLACEMENT OF WHITE AND ENGELMANN SPRUCE PROVENANCES (E.P. 672)	Prince Rupert plantations	Ministry of Forests Research Branch - G.K. Kiss	As in title
1.1.6.0	Fd	DOUGLAS-FIR PROVENANCE PLANTATIONS (E.P. 688)	Prince George Forest Region	Ministry of Forests Research Branch - L. Herring	As in title
1.1.6.0	Ss	GEOGRAPHIC VARIATION IN SITKA SPRUCE (E.P. 702) INCLUDES 5 STUDIES	Q.C.I.'s, North Vancouver Is. & North Coast	Ministry of Forests Research Branch - C.C. Ying	As in title
1.1.6.0	Fd	PROGENY TEST OF COASTAL DOUGLAS-FIR USING A FACTORIAL MATING DESIGN WITH FOUR MALE TESTERS (E.P. 707)	Goldstream and Cowichan Lake	Ministry of Forests Research Branch - J.C. Heaman	As in title
1.1.6.0	Cw, H, Pl, Ss	TREE SPECIES TRIAL IN THE KITIMAT VALLEY (E.P. 712)	Kitimat	Ministry of Forests Prine Rupert Res. Sec. - J. Pollack	As in title
1.1.6.0	Ss, H, Cw	TREE SPECIES TRIAL ON THE QUEEN CHARLOTTE ISLANDS (E.P. 814)	Q.C.I., Lyell Island, Sewell Inl.	Ministry of Forests Prince Rupert Res. Sec. /WFP - J. Pollack	To determine the best species or species mix for reforestation and effect of deer browsing

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.6.0	S	OPEN-POLLINATED PROGENY TESTING FOR INTERIOR SPRUCE SEED ORCHARD ESTABLISHMENT (E.P. 819)	Victoria	Ministry of Forests Research Branch - G.K. Kiss	As in title
1.1.6.0	B	GRAND FIR (E.P. 823)	4 sites Vancouver Region	Ministry of Forests Research Branch - C.C. Ying	Compare and contrast 23 populations
1.1.6.0	B	AMABILIS FIR PROVENANCE STUDY (E.P. 824)	Victoria	Ministry of Forests Research Branch - C.C. Ying	As in title
1.1.6.0	B	NOBLE FIR (E.P. 857)	5 sites Vancouver Region	Ministry of Forests Research Branch - C.C. Ying	Compare and contrast 28 provenances
1.1.6.0	Pw	PROGENY TEST OF BLISTER RUST RESISTANT WHITE PINE (259-1)	South central Vancouver Island	MacMillan Bloedel - R.C. Bower	Evaluate 'semi-resistant' white pine from the Idaho F1 seed orchard for: blister rust resistance, growth
1.1.6.0	Pw	INHERITANCE OF BLISTER RUST RESISTANCE CHARACTERISTICS (259-2)	South central Vancouver Island	MacMillan Bloedel - R.C. Bower	Determine if the rust canker inactivation is permanent as suggested by Hungerford
1.1.6.0	B	NOBLE FIR EXOTIC - PROVENANCE TRIAL (831-2)	South central and southeast Vancouver Island	MacMillan Bloedel - R.C. Bower	To assess survival and early growth of noble fir and comparison of several noble fir provenances
1.1.6.0	Lw	WESTERN LARCH PROVENANCE TEST (831-3)	South central and southeast Vancouver Island	MacMillan Bloedel - R.C. Bower	To test performance of 4 provenances on a variety of sites and compare growth with native species
1.1.6.0	Cw, H, B	ESTABLISHMENT TRIAL	Port McNeill	Western Forest Products - J. Barker	To test, in combination, three tree species plus cultivation weed control and burning
1.1.6.0	Ss	SITKA SPRUCE PROVENANCE STUDY	TFL24, Moresby	Western Forest Products - J. Barker	To determine the most desirable provenance

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.6.0	Fd, H, Ss	SELECTION OF PLUS TREES, CLONE BANKING AND SEED ORCHARDS	Vancouver Island	Tahsis Company Ltd. - S.I.O. Rasmussen	Production of genetically-superior planting stock
1.1.6.0	Fd	GENETIC VARIATION OF A SELECTED DOUGLAS-FIR POPULATION	UBC	UBC - Forestry - O. Szlklai	To correlate seed characteristics with seedling growth
1.1.6.0	Fd	COMPARATIVE KARYOTYPE ANALYSIS OF Pseudotsuga genus	UBC	UBC - Forestry - O. Szlkai	To compare Karyotypes of 7 species of Pseudotsuga
1.1.6.0	Cw	TREE IMPROVEMENT PROGRAM FOR WESTERN RED CEDAR	?	UBC - Forestry - O. Szlklai	Not specified
1.1.6.0	Pl	A COMPARISON OF BUD AND SHOOT GROWTH AND DEVELOPMENT IN PROVENANCES OF LODGPOLE PINE IN B.C.	Victoria	University of Victoria - J.N. Owens	To compare the annual growth cycle rate of growth and development and reproductive phenology
1.1.7.0	Fd	LOCAL POLLEN FLIGHT AT HARMAC	South central Vancouver Island	MacMillan Bloedel - R.C. Bower	To determine the timing, magnitude & duration of local pollen flight & correlate the clonal receptivity
1.1.7.0	Fd, Pl, H	THE DEVELOPMENT OF THE POLLINATION MECHANISM IN D.-FIR, LODGEPOLE PINE AND WESTERN HEMLOCK AND THE OPTIMAL TIME FOR POLLINATION IN D.-FIR (E.P. 899)	Victoria	Ministry of Forests Research Branch - J.N. Owens	As in title Includes 3 studies
1.1.7.1		POLLEN IDENTIFICATION AND POLLEN STRUCTURE OF NATIVE B.C. CONIFERS (E.P. 901)	Province-wide	Ministry of Forests Research Branch - J.N. Owens	To prepare a manual based on light microscope and scanning electron microscope photographs
1.1.7.2		STORAGE CONDITIONS AND VAIABILITY TESTING FOR CONIFEROUS POLLEN (E.P. 773) INCLUDES 3 STUDIES	Victoria	Ministry of Forests Research Branch - J.E. Webber	As in title
1.1.8.0	Fd	INBREEDING & STERILITY STUDIES WITH DOUGLAS-FIR (E.P. 474)	Cowichan Lake	Ministry of Forests Research Branch - F.C.H. Yeh	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.8.0	Fd	RACIAL CROSSES WITH DOUGLAS-FIR (E.P. 513)	Victoria	Ministry of Forests Research Branch - J.C. Heaman	As in title
1.1.8.0	Sl	TREE IMPROVEMENT OF INTERIOR SPRUCES IN B.C. (E.P. 670)	Victoria	Ministry of Forests Research Branch - G.K. Kiss	As in title
1.1.8.0	S	SPRUCE PICETA (E.P. 705)	Chilliwack & Red Rock	Ministry of Forests Research Branch - G.K. Kiss	As in title
1.1.8.0	Fd	THE BREED PRODUCTION PROGRAM FOR COASTAL DOUGLAS-FIR (E.P. 708) (N.B. Production rather than research)	?	Ministry of Forests Research Branch - J.C. Heaman	To make crosses between selected parents and to register progeny
1.1.8.0	Fd	INTERIOR DOUGLAS-FIR BREEDING ARBORETUM (E.P. 710)	Interior	Ministry of Forests Research Branch - B. Jaquish	As in title
1.1.8.0	Lw	WESTERN LARCH BREEDING ARBORETUM (E.P. 711)	?	Ministry of Forests Research Branch - B. Jaquish	As in title
1.1.8.0		CORRELATIONS BETWEEN QUANTITATIVE AND QUALITATIVE ATTRIBUTES (E.P. 776)		Ministry of Forests Research Branch - F.C.H. Yeh	Not specified
1.1.8.0	Pl	GENETIC IMPROVEMENT OF LODGEPOLE PINE (E.P. 770)	Smithers/Houston, P.G., E. Kootenay, Okanagan	Ministry of Forests Research Branch - M. Carlson	Establishment of breeding orchards
1.1.8.0		EXPERIMENTAL POPULATION GENETICS IN CONIFERS (ELECTROPHORESIS) (E.P. 778)	Victoria	Ministry of Forests Research Branch - F.C.H. Yeh	As in title
1.1.8.0	H	WESTERN HEMLOCK GENETIC IMPROVEMENT IN COASTAL B.C. (E.P. 813) INCLUDES 2 STUDIES	Coastal B.C.	Ministry of Forests Research Branch - M. D. Meagher	To provide genetically-improved seeds for coastal planting needs

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.1.8.0	B	AMABILIS FIR ARBORETUM: AMABILIS FIR GRAFTED ON UNDERSTOCK OF FOUR DIFFERENT SPECIES (E.P. 815)	Cowichan Lake	Ministry of Forests Research Branch - I.C. Karlsson	As in title
1.1.8.0	B	Abies amabilis x A. grandis HYBRIDIZATION	South central Vancouver Island	MacMillan Bloedel - R.C. Bower	Determine how readily grand fir and amabilis fir hybridize under seed orchard conditions
1.2.0.0		QUALITY CONTROL IN THE PRODUCTION OF NURSERY PLANTING STOCK (E.P. 928)	Victoria	Ministry of Forests Research Branch - A.N. Burdett	As in title
1.2.0.0		PROTECTION OF SEEDS, CONES AND SEEDLINGS FROM INSECTS-DISEASES (PC-44) INCLUDES: 3 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - J.R. Sutherland	To a) identify major pests; b) develop management strategies to minimize loss c) develop early detection methods
1.2.0.0		NURSERY PRACTICE - 84 trials by Silviculture Branch, B.C.F.S. - see Appendix IB			
1.2.2.0		DEVELOPMENT OF NEW SYSTEMS OF GROWING TREE SEEDLINGS	Maple Ridge	Pelton Reforestation	To develop more productive ways of raising new trees
1.2.2.0		SANITATION IN CONTAINER NURSERIES	Victoria	Ministry of Forests Silviculture Branch - (Mathews)	To develop controls for mosses, algae & liverwarts in nursery containers
1.2.2.0		PLUG FIRMING TRIAL (RNX 7954)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	Test of ability of Algenal and Tenogel to improve plug cohesiveness
1.2.2.0	Pl	LODGEPOLE PINE ROOT FORM TRIAL (RNX 7901)	Quesnel	Ministry of Forests Silviculture Branch	To monitor root responses to several types of Pl stock
1.2.2.0		STYROBLOCK HIGH DENSITY ASSESSMENT (RNX 7961)		Ministry of Forests Silviculture Branch	To compare and contrast two densities of styroblock

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.2.3.0	Sw	REQUIREMENTS OF CONIFER SEEDLINGS FOR MINERAL NUTRIENTS (E.P. 640) INCLUDES 9 STUDIES	Surrey Nursery	Ministry of Forests Research Branch - R. van den Driessche	As in title
1.2.3.0	Fd	NURSERY EXPERIMENTS WITH MINERAL NUTRIENTS (E.P. 753) INCLUDES 5 STUDIES	Campbell River	Ministry of Forests Research Branch - R. van den Driessche	As in title
1.2.3.0		PRODUCTION OF BARE-ROOT NURSERY STOCK ON COMPOSTED SEWAGE SLUDGE (E.P. 877)	Victoria	Ministry of Forests Research Branch - D. Simpson	To test sewage sludge/hog fuel compost as a growing medium
1.2.3.0	Fd, Pl	IRON AMENDMENT TRIALS (RNX 7953,7956,7957,7959)	Koksilla, Green Timbers, Marguerite	Ministry of Forests Silviculture Branch - (Matthews)	To improve Fe metabolism
1.2.3.0		LOW PHOSPHOROUS SOLUBLE FERTILIZER (RNX 7955)	Koksilah	Ministry of Forests Silviculture Branch - (Matthews)	As in title
1.2.3.0		ESMIGRAN TRIAL (RNX 7958 and 7960)	Marguerite, Green Timbers	Ministry of Forests Silviculture Branch - (Matthews)	Test a new trace element source
1.2.3.0		SOIL MIX DENSITY TEST (RNX 7963)	Koksilah Nursery	Ministry of Forests Silviculture Branch	Compare seedling growth at a range of soil compaction and density
1.2.3.0		GRACE SOIL MIX TEST (RNX 7966)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	Compare a commercial soil mix with nursery standard mix
1.2.3.0		GYPSUM TRIAL (RNX 7970)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	Substitution of gypsum for dolomitic lime
1.2.3.0		MODIFIED SOLUBLE FERTILIZER SCHEDULE (RNX 7971)	Surrey Nursery	Ministry of Forests Silviculture Branch - (Matthews)	Compare standard regimes to those of Georgia Pacific Nursery

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.2.3.0		HYDROGEL TRIAL - MARGUERITE (RNX 7972)	Marguerite	Ministry of Forests Silviculture Branch - (Matthews)	Tests of efficacy of Hydrogel
1.2.3.0		pH AND SALINITY OF OSMOCOTE SOIL (RNX 7973)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	Test of Osmocote for its effects on shifts in pH and salinity with fertilizing
1.2.3.0	Fd	OSMOCOTE SALINITY - INTERIOR DOUGLAS-FIR (RNX 7975)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	Tests of Osmocote & phosphate interaction
1.2.3.0		BLACK DIAMOND PEAT (RNX 7976)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	Tests of Black Diamond peat as an additive to nursery
1.2.3.0		TO DEVELOP TECHNIQUES AND EQUIPMENT FOR COMMERCIALLY GROWING FOREST SEEDLINGS IN WASHED SAND, SOIL BLOCKS AND NUTRIENT FILM	Maple Ridge	Pelton Reforestation	To encourage experiments using small fabricated soil plugs that contain tree seedlings
1.2.4.0	Fd, Sw	NURSERY SEEDBED DENSITY AND SEEDLING SPACING (E.P. 786) INCLUDES 9 STUDIES	Victoria	Ministry of Forests Research Branch - R. van den Driessche	As in title
1.2.4.0	Fd, Py	NURSERY CULTURE TREATMENTS FOR ENHANCED STOCK QUALITY AT INTERIOR NURSERIES (E.P. 836) INCLUDES 8 STUDIES	Red Rock, Skimikin	Ministry of Forests Research Branch	As in title
1.2.4.0	Sw, Fd, Lw	NEW METHODS FOR THE PRODUCTION OF FOREST PLANTING STOCK (E.P. 858) INCLUDES 6 STUDIES	Nelson Region, McBride	Ministry of Forests Research Branch - A.N. Burdett	As in title
1.2.4.0	Fd, Sw, Pl, Ss	CONDITIONING/FERTILIZER TRIALS IN 2+0 NURSERY STOCK (E.P. 866) INCLUDES 9 STUDIES	Skimikin, Red Rock, Surrey, Campbell River	Ministry of Forests Research Branch - D.G. Simpson	As in title
1.2.4.0	Fd	DOUGLAS-FIR ROOTING TRIAL (RNX 7952)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.2.4.1		DORMANCY AND FROST HARDINESS (E.P. 652)	Victoria	Ministry of Forests Research Branch - R. van den Driessche	As in title
1.2.4.2		THE EFFECT OF SOAKING SEEDS ON GERMINATION OF SOME MAJOR B.C. FOREST TREES (E.P. 835) INCLUDES 2 STUDIES	Victoria	Ministry of Forests Research Branch - C. Leadem	As in title
1.2.4.2	Fd, Pl, Sw, Cw, Yc	PELLETING TREE SEED TO IMPROVE SOWING PRECISION AND EFFICIENCY (E.P. 909) INCLUDES 6 STUDIES	Koksilah Nursery	Ministry of Forests Research Branch - C. Leadem	As in title
1.2.4.2		GROWTH AND GERMINATION EFFECT OF SEED COLLECTING METHOD (RNX 7964)	Koksilah Nursery	Ministry of Forests Silviculture Branch	Compares seed from squirrel caches with standard collections regarding germination and growth
1.2.4.2		GERMINATION SEQUENCE (SX 80206Q)	Victoria	Ministry of Forests Silviculture Branch - (Matthews)	To ascertain whether or not 'culls' might be late germinants
1.2.4.2	H	WESTERN HEMLOCK DORMANCY INITIATION TRIAL WITH ETHREL (Repeats RNX 7968) SX 80254Q	Koksilah Nursery	Ministry of Forests Silviculture Branch	To assess the efficacy of ethrel in inducing dormancy in Hw
1.2.4.3	H	INDUCTION OF DORMANCY AND FROST HARDINESS IN WESTERN HEMLOCK PLANTING STOCK (E.P. 764) INCLUDES 4 STUDIES	Victoria	Ministry of Forests Research Branch - W.D. Binder	To test conditioning of Hemlock for fall planting
1.2.4.3	Pl	CHEMICAL CONTROL OF ROOT MORPHOGENESIS IN CONTAINER SEEDLINGS (E.P. 791) INCLUDES 7 STUDIES	Victoria	Ministry of Forests Research Branch - A.N. Burdett	As in title
1.2.4.3	Sw	ROOT DEVELOPMENT IN WHITE SPRUCE	Victoria	University of Victoria - J.N. Owens	To study the growth cycle of seedling roots, the development and physiology of root tips
1.2.4.3	H	NEEDLE CAST FOLLOWING GREENHOUSE GROWING OF WESTERN HEMLOCK (E.P. 958)	Victoria	Ministry of Forests Research Branch - W.D. Binder	Influence of late season nursery shade maangement on reducing needle cast of western hemlock

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.2.4.3	Fd	BUD AND ROOT DEVELOPMENT OF COASTAL AND INTERIOR DOUGLAS-FIR SEEDLINGS DURING THE ANNUAL GROWTH CYCLE	Victoria	University of Victoria - J.N. Owens	Special emphasis will be given to the dormancy induction and dormant stages
1.2.4.3.	Sw	CHANGES IN SEEDLING ROOTS DURING THE GROWING AND DORMANT PERIODS. (THIS MAY FACILITATE DETERMINATION OF OPTIMAL TIME FOR LIFTING SEEDLINGS)	U. Vic	University of Victoria - J.N. Owens, Biology	To follow the development and determine the causes of the browning of seedling roots
1.2.4.3	H	HEMLOCK DORMANCY TRIAL (RNX 7902)	?	Ministry of Forests Silviculture Branch	Assess ethrel's efficacy in inducing frost hardiness
1.2.4.3		HARROP NURSERY TEST (RNX 7962) (N.B. operational rather than research)	Harrop Nursery	Ministry of Forests Silviculture Branch	Comparison of production methods
1.2.4.3	Cw	FROST HARDINESS ASSESSMENT OF WESTERN RED CEDAR (RNX 7980)	Koksilah Nursery	Ministry of Forests Silviculture Branch	Assess W.R. Cedar seedling's tolerance of sub-zero temperatures
1.2.5.0	Fd	ROOT DEVELOPMENT AFTER PLANTING (E.P. 779)	Cowichan Lake	Ministry of Forests Research Branch - I. Karlsson	Difference in root development between rooted cuttings & seedlings in D.-fir
1.2.6.0	Fd	THE EFFECTS OF UNDERCUTTING AND WRENCHING IN THE NURSERY ON SEEDLING QUALITY (E.P. 846)	Victoria	Ministry of Forests Research Branch - R. van den Driessche	Effects of wrenching time and lifting data on survival and growth of 2+0 Douglas-fir after planting
1.2.7.0		TESTING SELECTIVE HERBICIDES FOR BARE ROOT AND CONTAINER NURSERIES (E.P. 693) INCLUDES 6 STUDIES	Surrey, Koksilah & Red Rock Nurseries	Ministry of Forests Research Branch - R. van den Driessche	as in title: oxadiazon, bifenox, prometryne, diphenamid
1.2.7.0		TESTS ON ROUNDUP AND KRENITE (SX 796000)	Blue River, ESSF wet subzone	Ministry of Forests Silviculture Branch	As in title
1.2.8.0		ROOT DIPPING AND FOLIAGE TREATMENTS TO IMPROVE SEEDLING SURVIVAL AND GROWTH (E.P. 827) INCLUDES 5 STUDIES	Victoria	Ministry of Forests Research Branch - D.G. Simpson	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.2.8.0	Se, Sw	SEEDLING QUALITY RESEARCH (E.P. 869) INCLUDES 6 STUDIES	Nurseries	Ministry of Forests Research Branch - D.G. Simpson	As is title
1.2.8.0		MITOTIC INDEX AS AN INDICATOR OF DORMANCY, LIFTING AND FROST HARDINESS STATUS OF CONIFERS (E.P. 960)	Victoria	Ministry of Forests Research Branch - W.D. Binder	As in title
1.2.8.0		SPENCER LEMAIRE HANDLING TRIAL (RNX 7951)	Vancouver Region	Ministry of Forests Silviculture Branch	As in title
1.2.8.0	Sw	OVERWINTERING OF INTERIOR SPRUCE (RNX 7979)	Koksilah Nursery	Ministry of Forests Silviculture Branch	Compare open and covered overwinter storage
1.3.0.0	Fd	DEVELOPMENT OF SILVICULTURAL PRESCRIPTIONS FOR DRYBELT DOUGLAS-FIR SITES IN THE CARIBOO FOREST REGION (E.P. 841) INCLUDES 4 STUDIES	Cariboo	Ministry of Forests Research Branch - A. Vyse	As in title (see also 1.4.0.0)
1.3.0.0		REGENERATION AND SILVICULTURAL SYSTEMS, PACIFIC AND YUKON REGION (PC-48) - 15 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - J.T. Arnott	To develop, test and demonstrate new reforestation systems and improved stand tending and establishment
1.3.0.0		REFORESTATION - 97 trials by Silviculture Branch B.C.F.S.; Planting - 69, Site Preparation - 28. - See Appendix IC			
1.3.1.0	Se, Sw	THE EFFECTS OF A CAZE & HEPPNER PLOW SITE PREPARATION TREATMENT ON THE SURVIVAL AND GROWTH OF INTERIOR SPRUCE (780-13-6-16)	Horsefly, TSHL A01964	Weldwood of Canada Merrill & Wagner Ops - V. Grainger	To compare the effects of plowing on the growth of bareroot and of plug spruce seedlings
1.3.1.1	Pl, Sw	BIOLOGICAL EFFECTIVENESS OF EQUIPMENT TESTED IN SILVICULTURAL MECHANICAL SITE PREPARATION TRIALS (E.P. 741)	Central Interior	Ministry of Forests/ P.G. Res. Sec/CFS-PFRC - McMinn, Herring	As in title
1.3.1.1		EQUIPMENT DEVELOPMENT AND PRODUCTS TESTING (V-BLADE, SPOT SCARIFIER)	Interior	Ministry of Forests Engineering Branch - S.F. Lam	To prepare sites for planting

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.3.1.1		MECHANIZATION OF SILVICULTURE: SCARIFICATION (11.2)	Vancouver	FERIC - I.B. Hedin	To determine if machines and methods currently in use are meeting the needs of the industry
1.3.1.1	Pl, Sw	DRAG SCARIFICATION (E.P. 800)	Sutherland Forest/Vanderhoof	Ministry of Forests P. George Research Sec. - L. Herring	To test a range of mechanical site treatments on planting success and on natural ingress
1.3.1.2		OPERATIONAL BROADCAST BURNING - SITE PRODUCTIVITY TRIALS (E.P. 953)		Ministry of Forests Research Branch - A.M. Macadam	As in title
1.3.1.2		FIRE RESEARCH IN SUPPORT OF FOREST RESOURCE MANAGEMENT (see also 1.4.5.3)	B.C. & Yukon	Can. Forestry Service: PFRC - B.D. Lawson	Ecological effects of fire; improved Fire Danger Rating System; fire as a silvicultural tool
1.3.1.2	Fd	IMPACT OF PRESCRIBED BURNING ON FOREST PRODUCTIVITY (see also 1.4.5.3)	Coastal B.C.	MacMillan Bloedel - T.P. Rollerson	Assess the effects of burning on a) site productivity; b) growth of Douglas-fir; c) competing vegetation
1.3.1.2		LOSSES OF NUTRIENTS TO THE ATMOSPHERE DURING SLASH BURNS	Vancouver	UBC - Forestry - M.C. Feller	To relate slash fire characteristics and C.F.W.I. codes, to nutrient losses into the atmosphere during slash burns
1.3.2.1	Pl	IDENTIFICATION OF FACTORS INFLUENCING THE NATURAL REGENERATION OF LODGEPOLE PINE (E.P. 804)	Burns Lake Bulkley River	Ministry of Forests P. Rupert Research Sec. - J. Pollack	Relate cone habit, seed supply, logging method and post logging treatment to regeneration performance
1.3.2.2		INVESTIGATIONS WITH SHELTERCONES FOR DIRECT SEEDING	East Kootenay	Crestbrook Forest Ind./ Ministry of Forests - Sec. 88	As in title
1.3.2.2		SPOT SEEDING TRIAL (SX 80300Q)	5 locations - southern Interior	Ministry of Forests Silviculture Branch	To determine if use of the Finnish shelterconе improved germination
1.3.3.0	Ss	ESPACEMENT TRIAL OF SITKA SPRUCE (E.P. 570)	Terrace	Ministry of Forests Research Branch - J. Pollack	As in title

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1.3.3.0		PLANTING HAZARD INDEX (E.P. 766)	Boston Bar Pemberton	Ministry of Forests Vancouver Res. Sec. - F. Pendl	To construct a planting hazard index expressing seedling survival % as a function of site, seedling & weather
1.3.3.0		DEVELOPMENT OF REFORESTATION METHODS FOR AVALANCHE CONTROL (E.P. 781)	Stagleap Provincial Park	Ministry of Forests Nelson Res. Sec. - C.F. Thompson	As in title
1.3.3.0	Sw	PLANTING SITE AND STOCK TREATMENTS FOR BRUSHFIELD CONVERSION (E.P. 933)	Prince George Walker-Goodson Ck.	Ministry of Forests Prince George Res. Sec. - L. Herring	To test stock type, chemical site preparation and fertilization
1.3.3.0	Fd	ANIMAL DAMAGE (2-018)	TFL 2 Johnstone St.	C/Z Coast Wood Division - F.T. Leslie	To determine the effect of animal damage and to test various protection systems
1.3.3.0		REGENERATION FAILURE ON SOUTH-FACING ASPECTS (316-1) (Sec. 88 HV 99003)	TFL 39	MacMillan Bloedel	To determine which treatments are most likely to ensure planting success, in a variety of conditions
1.3.3.0		DEVELOPMENT OF APPROPRIATE ESTABLISHMENT REGIMES FOR MAJOR ECOSYSTEMS	TFL's Vancouver Island	Western Forest Products - J. Barker	To provide data for comparative cost/ benefit analyses of a range of establishment regimes
1.3.3.0		ESTABLISHMENT TRIAL	Jordan River	Western Forest Products - J. Barker	To test, in combination, stock type, fertilization weed control and browse repellent
1.3.3.0	Cw, H, B	ESTABLISHMENT TRIAL (25-002) (Sec. 88 - HV 99025)	Port McNeill TFL 25	Western Forest Products - J. Barker	To test, in combination, three tree species plus cultivation weed control and burning
1.3.3.0		ASSESSMENT OF RE-ESTABLISHMENT TECHNIQUES FOR HIGH SITE CUTOVER LANDS (25.001) (Sec. 88 HV 99024)	Holberg TFL 6	Western Forest Products	To evaluate and quantify benefits of regimes applicable to high quality sites
1.3.3.0		BIODEGRADABLE SEEDLING CONTAINER	Vancouver	UBC - Forestry - J. Walters	To develop a seedling container, rigid in nursery use but which breaks down rapidly after planting

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1.3.3.0		A COMPARISON OF PLANTING ALTERNATIVES	?	Ministry of Forests Silviculture Branch - (van Eerden)	To develop methodology for establ. forest stands with stock types, site preparation and planting
1.3.3.2		MECHANIZATION OF SILVICULTURE: PLANTING MACHINE (11.2)	Vancouver	FERIC - I. B. Hedin	To evaluate the Walters "Reforester"
1.3.3.2		FIELD TEST OF TWO TYPES OF PLANTING GUN (RNX 7905)	Hope	Ministry of Forests Silviculture Branch	As in title
1.3.3.2		INJECTION PLANTING MACHINE	Vancouver	UBC - Forestry - J. Walters	not specified
1.3.3.2		THE DESIGN AND DEVELOPMENT OF AN AUTOMATIC TREE-PLANTING SYSTEM TO OPERATIONAL STANDARDS	UBC	UBC - Forestry - J. Walters	As in title
1.3.3.2		PLANTING GUN MODIFICATIONS	?	Ministry of Forests	Tools based on "Walter's bullet"
1.3.3.3	Cw, B, Fd	SPACING TRIALS OF PURE AND MIXED STANDS (E.P. 429)	Chilliwack Campbell River	Ministry of Forests Research Branch - S. Omule	To compare the survival, growth and yield of pure and mixed test plantations
1.3.3.3	Sw	WHITE SPRUCE ESPACEMENT TRIAL (E.P. 549)	Anzac and Buckhorn Lake	Ministry of Forests Pr. George Res. Sec. - L. Herring	As in title
1.3.3.3		TREE SPECIES AND ESPACEMENT TRIAL (E.P. 571)	West Coast Vancouver Island	Ministry of Forests Research Branch - S.A.Y. Omule	As in title
1.3.3.3		TRIAL OF TREE SPECIES AND ESPACEMENT IN THE SUB BOREAL SPRUCE BIOGEOCLIMATIC ZONE (E.P. 660)		Ministry of Forests Pr. George Res. Sec - L. Herring	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.3.3.4	Sl	EARLY GROWTH AND SURVIVAL OF INTERIOR SPRUCE STOCK TYPES (E.P. 859) INCLUDES 9 STUDIES		Ministry of Forests Research Branch - A Vyse R. van den Driessche	As in title
1.3.3.4	Pl, Se, Sw	ECOPHYSIOLOGICAL STUDIES OF REGENERATION PROBLEMS IN THE INTERIOR OF B.C. (E.P. 893)	Willow Forest (PG) Riske Creek (Carib) Spanish Lake "	Ministry of Forests/UBC Research Branch - J. Bassman	To describe the physiology of regeneration failure and plant growth "strategy"
1.3.3.4	Fd, H	FALL ROOT PHENOLOGY -(DOUGLAS-FIR AND WESTERN HEMLOCK) (315-1)	East Vancouver Island	MacMillan Bloedel - B.C. Dunsworth	To quantify fall root activity and correlate with soil moiture & temp. and det. optimal time for fall plant.
1.3.3.4	B, Fd, H	REGENERATION FAILURE ON SOUTH-FACING ASPECTS (316-1) (Sec. 88 HV 99003)	East Vancouver Island	MacMillan Bloedel - B.G. Dunsworth	To compare seasonal envir. parameters of habitat types with potentials for reforestation
1.3.3.4	Cw	CONTAINER TRIALS ON THREE WESTERN RED CEDAR STOCK TYPES (341-3) (Sec. 88 HV 99019)	West, Central & North Vancouver Island	MacMillan Bloedel - B.G. Dunsworth	Compare the growth, survival, root development & provenance influence under field conditions
1.3.3.4	Hw, Fd	PLANTING QUALITY ASSESSMENT (342-1)	Vancouver Island	MacMillan Bloedel - R.C. Bower	To determine if height advantage shown by planted trees at 2 years is maintained five years hence
1.3.3.5		PLANTING TRIALS IN THE PRINCE RUPERT FOREST REGION (E.P. 502)		Ministry of Forests Pr. Rupert Res. Sec. - J. Pollack	As in title
1.3.3.5	Fd	SURVIVAL AND INITIAL GROWTH OF MORPHOLOGICALLY-DEFINED CLASSES OF DOUGLAS-FIR PLANTING STOCK ON HIGH SITE LANDS SUBJECT TO DENSE COVER (E.P. 589)	Port Alberni Mission	Ministry of Forests Vancouver Res. Sec. - F. Pendl	To relate survival of D.-fir planted stock to 1) planting method, 2) morphology, 3) competition
1.3.3.5	Pl	EFFECT OF PLANTING SEASON AND STOCK TYPE ON LODGEPOLE PINE SEEDLING FERFORMANCE (E.P. 695)		Ministry of Forests Pr. Rupert Res. Sec. - J. Pollack	As in title
1.3.3.5		TREE SPECIES TRIAL IN THE KITIMAT VALLEY (E.P. 712)		Ministry of Forests Pr. Rupert Res. Sec. - J. Pollack	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.3.3.5		HIGH ELEVATION SPECIES AND STOCK TYPE TRIALS (E.P. 759)		Ministry of Forests Research Branch - F.T. Pendl	As in title
1.3.3.5		PLANTATION TRIALS IN THE KAMLOOPS FOREST REGION (E.P. 790) INCLUDES 2 STUDIES		Ministry of Forests Kamloops Res. Sec. - M. B. Clark	As in title
1.3.3.5		TREE SPECIES TRIAL ON THE QUEEN CHARLOTTE ISLANDS (E.P. 814)	Queen Charlotte Islands	Ministry of Forests Research Branch - J. Pollack	As in title
1.3.3.5		A PROCEDURE FOR COMPARING ALTERNATIVES IN PLANTING TREE SEEDLINGS	Vancouver	B.C. Research - A. Tunner	To develop a simple procedure for comparing alternatives in tree planting
1.3.3.5		SURVIVAL TEST (2-004)	TFL 2, Nitinat, Courtenay, Beaver Cove	C/Z Coast Wood Division - F.T. Leslie	To determine the biological effective-ness of container-grown seedlings as compared to bare-root stock
1.3.3.5		SHELTERCONE SEEDING TRIAL (A PLANTING AND SEEDING TRIAL IS ALSO INCORPORATED)	Quesnel, TFL 5	Weldwood of Canada - W. Herringshaw	To compare in an operation trial, sheltercone and gun planting systems
1.3.3.5	Sw, Se	WELDWOOD STOCK TRIALS FOR BRUSHY SITES (PSB211 1+0 plugs, 2+0 bareroot, (15 cm), 2+0 bareroot (10-15 cm),2+1 bareroot and 1-1/2+1/2 transplant)	Horsefly, TSHL A01964	Weldwood of Canada Merrill & Wagner Ops - V. Grainger	To compare the performance of 5 spruce stock types
1.3.3.5		ASSESSMENT OF RE-ESTABLISHMENT TECHNIQUES FOR HIGH SITE CUTOVER LANDS Project 25-001	?	Western Forest Products - J. Barker	Not specified
1.3.3.5		COMPARISON OF PLANTING ALTERNATIVES	Vancouver	Ministry of Forests Silviculture Branch - van Eerden	To determine an appropriate establishment technique and the expected resultant m.a.i.
1.3.4.0	Cw, Yc, B, Fd, H, Ss	ADAPTABILITY OF TREE SPECIES TO SITES (E.P. 368)	Ucluelet	Ministry of Forests Research Branch - S. Omule	Test performance of various tree species at three locations

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.3.4.0	Cw, Yc, B, Fd, H, Pw	HIGH ELEVATION SPECIES AND STOCK TYPE TRIALS (PC 48-257) (E.P. 759)	Vancouver Region	Can. Forestry Service: PFRC/Min. of Forests - J.T. Arnott, F. Pendl	To assess and compare the survival and growth of 8 spp. and 3 stock types on high elevation sites in Van. Reg.
1.3.4.0	Pw	TREE SPECIES IN THE CARIBOO FOREST REGION: SPECIES TRIAL INCLUDING WHITE PINE IN THE ICH (b) SUBZONE (E.P. 904)	Cariboo	Ministry of Forests Cariboo Res. Sec. - A. Vyse	As in title
1.4.0.0	Pl	THE EFFECTS OF STAND DENSITY ON THE TOP HEIGHT OF LODGEPOLE PINE STANDS IN THE CARIBOO FOREST REGION (E.P. 842)	Cariboo	Ministry of Forests Cariboo Res. Sec. - A. Vyse	As in title
1.4.0.0	Fd	GROWTH AND BIOLOGY OF COASTAL DOUGLAS-FIR ECOSYSTEMS IN RELATION TO STAND TENDING PC-23 INCLUDES: 8 STUDIES	Victoria	Can. Forestry Service: PFRC - H. Brix	To develop a predictive model of tree growth and soil processed as affected by thinning and fertilizing
1.4.0.0	Fd, Sw	HERBICIDES AND OTHER CHEMICALS IN THE FOREST ENVIRONMENT (PC-51)	B.C. & Yukon	Can. Forestry Service: PFRC - J.F. Manville	To evaluate chemical and growth changes induced by application of the commonly-used herbicides
1.4.0.0		SILVICULTURE	Vancouver Island	Pacific Forest Products - V.J. Korelus	To conduct research projects which will enhance our knowledge about tree species and their management
1.4.0.0		TREE-RING ANALYSES TO IMPROVE YIELDS OF NATURAL AND PLANTED STANDS	Vancouver	UBC - Forestry - J.H.G. Smith	As in title
1.4.0.0		STAND TENDING - 35 trials by Silviculture Branch, B.C.F.S. - See Appendix ID			
1.4.1.0		A NEW TREE INJECTOR SYSTEM (E.P. 867)	Cowichan Lake, Cranbrook, 100 Mile Hs., Vanderhoof	Ministry of Forests - B. Dillistone	To test an arboricide injector
1.4.1.0		MANAGEMENT OF COASTAL ALLUVIAL SITES (E.P. 885) INCLUDES 4 STUDIES	North Coast	Ministry of Forests P. Rupert Res. Sec. -J. Pollack	To test a range of vegetation management strategies

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.1.0	Sw	FOREST VEGETATION MANAGEMENT IN WHITE SPRUCE PLANTATIONS	McGregor R., Trapping Lake, Blackwater Cr.	Ministry of Forests P. George Res. Sec. - L. Herring	To compare the efficacy of chemical and manual weed control in plantations of white spruce
1.4.1.0		TREE MANAGEMENT WITH THE WEEDO SYSTEM	Vancouver	B. Dillistone, Maple Ridge/Sci. Council of B.C.	To develop a herbicide lance for treating forest weed trees
1.4.1.0		OPERATIONAL BRUSH CONTROL TRIAL (491.2) (Sec. 88 HV 99038)	Vancouver Island	MacMillan Bloedel Ltd. - B.G. Dunsworth	To compare safety and cost-effectiveness of manual and chemical brush control methods
1.4.1.0		FOREST PROTECTION, HERBICIDES IN FORESTS	Vancouver Island	Pacific Forest Products - R.H. Heath	To evaluate and recommend on use of the herbicides in forest management
1.4.1.0		ESTABLISHMENT TRIAL	Jordan River	Western Forest Products - J. Barker	To test, in combination, stock type, fertilization weed control and browse repellent
1.4.1.0	Cw, H, B	ESTABLISHMENT TRIAL	Port McNeill	Western Forest Products - J. Barker	To test, in combination, three tree species plus cultivation weed control and burning
1.4.2.0		SPACING TRIALS OF PURE AND MIXED STANDS (E.P. 429)		Ministry of Forests Research Branch - S.A.Y. Omule	As in title
1.4.2.0	Fd	SPACING TRIAL OF DOUGLAS-FIR (E.P. 534)	16 Creek Vancouver Island	Ministry of Forests Research Branch - S.A.Y. Omule	As in title
1.4.2.0	Py	EFFECTS OF INITIAL SPACING OF THE GROWTH AND DEVELOPMENT OF PONDEROSA PINE (E.P. 607)		Ministry of Forests Kamloops Res. Sec. - Clark, Thompson	As in title
1.4.2.0	Py	EFFECTS OF JUVENILE SPACING ON INDIVIDUAL TREE GROWTH AND DEVELOPMENT OF PONDEROSA PINE (E.P. 630)		Ministry of Forests Pr. Rupert Res. Sec. - J. Pollack	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.2.0	Pl	THE EFFECT OF INITIAL ESPACEMENT ON THE GROWTH OF LODGEPOLE PINE (E.P. 671) INCLUDES 3 STUDIES	Fraser Lake, Lac le Jeune	Ministry of Forests - M.B. Clark, L.Herring, W.G. Chapman	To determine the effects of initial spacing on subsequent development of Pl in plantations (see also 1.3.3.3)
1.4.2.0	Pl	SHORE PINE SPACING AND PROVENANCE TRIAL (E.P. 692)		Ministry of Forests Research Branch - C.C. Ying	As in title
1.4.2.0	Pl	GROWTH ENHANCEMENT OPTIONS FOR DENSE IMMATURE LODGEPOLE PINE STANDS (E.P. 789) INCLUDES 6 STUDIES	Cariboo	Ministry of Forests Pr. George Res. Sec. - L. Herring	As in title
1.4.2.0	Pl	THE EFFECT OF SPACING ON THE GROWTH & YIELD OF OF LODGEPOLE PINE (E.P. 922)		Ministry of Forests Research Branch - W. Johnstone	As in title
1.4.2.0		MECHANIZATION OF SILVICULTURE: JUVENILE SPACING (11.1)	Vancouver	FERIC - I.B. Hedin, D.C. Moulson	To define the objectives and requirements of juvenile spacing machines and suggest methods to mechanize
1.4.2.0	Ss	MORESBY SITKA SPRUCE SEED PRODUCTION AREA	TFL24, Moresby	Western Forest Products - J. Barker	Initial objective abandoned; juvenile spacing demonstration
1.4.2.0	Fd, H, Cw	LONGTERM EFFECTS OF INITIAL SPACING AND OTHER FACTORS ON GROWTH AND YIELD	Vancouver	UBC - Forestry - J.H.G. Smith	To document the effects of spacing, rectangularity and species on stand development
1.4.3.0	Fd	SUCCESSIVE THINNINGS IN A NATURAL STAND OF DOUGLAS-FIR (E.P. 62, 63, 64, 66, 283)		Ministry of Forests Research Branch - S.A.Y. Omule	As in title
1.4.3.0		THINNING AND PRUNING DEMONSTRATION PLOTS (E.P. 204, 205, 499) SEE ALSO 1.4.4.0		Ministry of Forests Research Branch - S.A.Y. Omule	As in title
1.4.3.0	Fd	COMMERCIAL THINNING IN DOUGLAS-FIR (E.P. 364)	Cowichan Lake	Ministry of Forests Research Branch - S. Omule	To compare yields in commercially-thinned and unthinned stands

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1.4.3.0	Fd	THINNING STUDY IN DOUGLAS-FIR (E.P. 365)	Cowichan Lake	Ministry of Forests Research Branch - S. Omule	To relate growth and yield to growing space and volume increment
1.4.3.0	Pl	THINNING EXPERIMENT IN LODGEPOLE PINE (E.P. 384,385)	Canal Flats	Ministry of Forests Nelson Res. Sec. - C. Thompson	To study the effects of thinning intensity on growth, yield and susceptability to beetle attack
1.4.3.0	Cw	COMMERCIAL THINNINGS IN WESTERN HEMLOCK (E.P. 388)	E. Thurlow Island	Ministry of Forests Research Branch	To compare yields in commercially-thinned and unthinned stands
1.4.3.0	Lw	CROP TREE THINNING OF WESTERN LARCH, (E.P. 511)	Perry Creek, East Kootenays	Ministry of Forests Nelson Res. Sec. - C.F. Thompson	To determine if thinning can improve growth and force of western larch
1.4.3.0	Py	EXPERIMENTAL THINNING AND PRUNING OF PONDEROSA PINE (E.P. 517) (SEE ALSO 1.4.4.0)	Lambly Creek, Kelowna	Ministry of Forests Kamloops Res. Section - M.B. Clark	To determine which thinning and pruning regime produces peeler logs most quickly
1.4.3.0	Fd, H	RESPONSES OF IMMATURE DOUGLAS-FIR AND WESTERN HEMLOCK TO THINNING AND FERTILIZER APPLICATION (E.P. 703) SEE ALSO 1.4.6.0		Ministry of Forests Research Branch - Barker, Godfrey	As in title
1.4.3.0	Pl	FERTILIZING AND THINNING IN INTERIOR FORESTS (E.P. 886) INCLUDES 3 STUDIES, SEE ALSO 1.4.6.0		Ministry of Forests Research Branch - Barker Brockley, Draper	As in title
1.4.3.0	Pl	A STUDY TO DETERMINE THE EFFECTS OF INITIAL ESPACEMENT AND SUBSEUQUENT THINNING ON THE GROWTH AND YIELD OF LODGEPOLE PINE PLANATATIONS (E.P. 962)		Ministry of Forests Kamloops Res. Sec. - W.D. Johnstone	As in title
1.4.3.0		MECHANIZATION OF SILVICULTURE: THINNING (11.2)	Vancouver	FERIC - I.B. Hedin	To evaluate commercial thinning trials
1.4.3.0	Fd	GROWTH & BIOLOGY OF COASTAL DOUGLAS-FIR ECOSYSTEMS IN RELATION TO STAND TENDING (PC-23)	Vancouver Island	Can. Forestry Service: PFRC - H. Brix	Investigate tree growth and biological process of soil & vegetation in response to thinning & fertilization

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.3.0	Fd, H	THE EFFECT OF THINNING AND FERTILIZATION ON THE GROWTH AND YIELD OF SECOND GROWTH STAND (sic) (CZ-2-002) (Sec. 88 HV 99037)	Quadra Island	CZ Coast Wood Division - F.T. Leslie	To determine the effect of various thinning and fertilization on growth, value, costs, mortality & soil damage
1.4.3.0		COMPETITION OF UNDERSTOREY TREES IN A JUVENILE-SPACED STAND (2-009)	?	C/Z Coast Wood Division - F.T. Leslie	To assess the unthinned smaller trees on crop trees and observe the fate of these in a spaced stand
1.4.3.0	Pl	1969 THINNING PROJECT	TFL24, Moresby	Western Forest Products - J. Barker	To thin to 10' x 10' and evaluate results
1.4.3.0		INCREMENT CORE SAMPLING IN PRODUCTIVITY TRIALS	Vancouver	UBC - Forestry - J.H.G. Smith	To relate changes in ring width and latewood proportions to thinning and fertilizing treatments
1.4.3.0	Pl	MSMA INJECTION TRIAL YAKH VALLEY (SX 79602Q)	Yakh Valley	Ministry of Forests Silviculture Branch	Test of mortality resulting from injection of several rates of MSMA
1.4.4.0		PRUNING TRIAL	Vancouver Island	Canadian Forest Products - D.E. Rickson	To determine if pruning is a cost-effective method of increasing wood quality
1.4.5.0		DETECTION AND APPRAISAL OF FOREST PESTS AND TREE DAMAGE (PC-02)	B.C. & Yukon	Can. Forestry Service: PFRC - G.A. Van Sickle	Produce ann.survey,conduct quarantine -related activities, maintain records & det. implications of pest activity
1.4.5.0		PROTECTION OF SEEDS, CONES AND SEEDLINGS FROM INSECTS-DISEASES (PC-44) INCLUDES: 3 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - J.R. Sutherland	To a) identify major pests; b) develop management strategies to minimize loss c) develop early detection methods
1.4.5.0		TOXIC SUBSTANCES AND THE FOREST ENVIRONMENT (PC-51)		Can. Forestry Service: PFRC - J. Manville	To assess chemical changes on crop trees caused by herbicides & study of chemical bases of biological processes
1.4.5.0		FOREST PROTECTION, IN SEED ORCHARDS IN NURSERIES	Vancouver Island	Pacific Forest Products - R.H. Heath	To minimize losses due to diseases, insects and weeds in nurseries and seed orchards

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.5.1	Pl	LODGEPOLE PINE SEED DAMAGE BY DEER MICE AND RELATED SMALL MAMMALS (E.P. 833)		Ministry of Forests Research Branch - T.P. Sullivan	As in title
1.4.5.1	Pl	THE EFFECTS OF HARE AND SQUIRREL DAMAGE ON MANAGED STANDS IN THE B.C. INTERIOR (E.P. 345) INCLUDES 2 STUDIES	Bowes Creek, Alex Graham Mt.	Ministry of Forests Research Branch - T.P. Sullivan	As in title
1.4.5.2		PHOTO INTERPRETATION OF AIR POLLUTION (SO_2) AND ACID RAIN EFFECTS ON VEGETATION (see also 1.5.2.0)	Vancouver	UBC - Forestry - P.A. Murtha	To compare air photo interpretation and digital analysis of MSS data for SO_2 stress detection
1.4.5.3		FIRE STUDIES		Ministry of Forests - Protection Branch	F.W.I. system, fuel loadings and fire potentials; air tanker productivity
1.4.5.3		INFRARED SCANNING TO DETECT WILDFIRES	Victoria	Ministry of Forests - Protection Branch (Townsend)	To reduce losses by improving detection of new and "hangover" fires
1.4.5.3	Fd	IMPACT OF PRESCRIBED BURNING ON FOREST PRODUCTIVITY	Coastal B.C.	MacMillan Bloedel - T.P. Rollerson	Assess the effects of burning on a) site productivity; b) growth of Douglas-fir; c) competing vegetation
1.4.5.3		EFFECTS OF SLASHBURNING ON DUFF THICKNESS AND NUTRIENT LEVEL	Jordan River	Western Forest Products - J. Barker	An exploratory trial to determine if more detailed studies are needed or not
1.4.5.3		DRAG REDUCTION INJECTION FOR FIRE CONTROL FIELD UNIT PREPARATION		UBC - Forestry - N. Franz	As in title
1.4.5.4	Sw	TEST TO DETERMINE MOST EFFECTIVE LETHAL TRAP TECHNIQUE FOR SPRUCE BEETLE CONTROL (E.P. 852)	Topley Landing	Ministry of Forests Prince Rupert Res. Sec. - J. Pollack	To test the efficacy of spruce trap trees treated with insecticide and pheromone
1.4.5.4	Pl	INVESTIGATIONS ON THE IMPACT OF THE LODGEPOLE PINE TERMINAL WEEVIL ON LODGEPOLE PINE IN THE B.C. INTERIOR (E.P. 894)	Cariboo	Ministry of Forests Cariboo Res. Sec./UBC - A. Vyse, J. McLean	To elucidate the life history of T.weevil and relate stand parameters to liability and damaging attacks

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.5.4		REDUCTION OF LOSSES FROM BARK AND WOOD BORING INSECTS (PC-06) INCLUDES: 8 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - L. Safranyik	To develop forest management guidelines to reduce losses from injurious bark- and wood-boring insects
1.4.5.4	Fd, H, Ss	DEVELOPMENT OF PEST MANAGEMENT SYSTEMS (PC-40) INCLUDES: 6 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - W.J. Bloomberg	To develop computer system applications to management of 4 major pests of forest stands
1.4.5.4		BIOLOGICAL CONTROL OF FOREST PESTS (PC-63) INCLUDES: 8 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - M. Hulme	To elucidate principles and develop effective biological controls of forest pests
1.4.5.4		INSECT CONTROL (12.2)	Vancouver	FERIC - D.C. Moulson with CFS	To kill overwintering bark beetles in broad trees
1.4.5.4		CHEMICAL ECOLOGY OF FOREST INSECTS	SFU	Simon Fraser University - J.H. Borden & colleagues	To isolate, identify, synthesize & test semiochemicals of forest insects and apply them in pest management
1.4.5.4		TOXICITY OF ORTHENE	SFU	Simon Fraser University - G.H. Geen & others	To determine the toxicity and behaviour of acephate (Orthene), an organophosphoric insecticide
1.4.5.4		CLASSIFICATION OF IMMATURE INSECT PARASITES OF FOREST AND AGRICULTURAL INSECT PESTS	SFU	Simon Fraser University - T. Finlayson	As in title
1.4.5.4		WIND TUNNEL ANALYSIS AND DEVELOPMENT OF PHEROMONE-BASED FOREST INSECT TRAPPING SYSTEMS	Vancouver	UBC - Forestry - B.S. Lindgren	As in title
1.4.5.4		BEHAVIOURAL RESPONSES OF ADULT FOREST INSECTS TO THEIR PHEROMONES IN A WIND TUNNEL	Vancouver	UBC - Forestry - J.A. McLean	To improve trap design
1.4.5.4	Fd, H	STUDIES OF FOREST INSECTS IN B.C. WITH SPECIAL REFERENCE TO DEFINING MINERAL PROFILES OF INSECTS	Vancouver	UBC - Forestry - J.A. McLean	To define mineral profiles of insects & their appli. in studies of nutrition, nutrient cycling & dispersal

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.5.4	Ss	STUDIES OF THE WHITE PINE WEEVIL ON SITKA SPRUCE IN B.C.	Vancouver Island	UBC - Forestry - J.A. McLean	Studies of repellents and remote sensing surveys
1.4.5.4.		USE OF PHEROMONES TO CONTROL INSECT PESTS IN THE B.C. FORESTRY AND AGRICULTURAL INDUSTRIES	Vancouver	UBC - Chemistry - L. Weller/Sci. Council of B.C.	To study a group of naturally occurring insect sex attractant chemicals called pheromones
1.4.5.4		TO DEVELOP TECHNOLOGY TO PRODUCE CHEMICAL SEX ODORS USEFUL IN TRAPPING FOREST INSECTS	UBC	UBC - Chemistry - L. Weller	As in title
1.4.5.4		COLOUR-INFRARED ANALYSIS OF MOUNTAIN PINE BEETLE DAMAGE (see also 1.5.2.0)	Vancouver	UBC - Forestry - P.A. Murtha/Sci. Council of B.C.	To ascertain if bark beetle damage can be detected at an early stage by remote sensors
1.4.5.4		FIELD STUDIES OF PHEROMONE ATTRACTANCY IN THE WINTER MOTH AND SPAN WORM	Victoria	University of Victoria - Biology (Ring)/ Sci. Council of B.C.	To arrest spread and reduce damage to trees and shrubs by 2 Operoptera spp.
1.4.5.4		FOREST PROTECTION, Ambrosia BEETLES	Vancouver Island	Pacific Forest Products - R.H. Heath	Develop programs to reduce damage to harvested timber by Ambrosia beetles
1.4.5.4		EFFECTIVENESS OF CONDUCTING INSECT SURVEYS USING LOW LEVEL, FIELD BASE 70 mm PHOTOGRAPHY	White River	Revelstoke Sawmill (Radium) Ltd./Ministry of Forests	As in title
1.4.5.4	Fd	DOUGLAS-FIR TUSSOCK MOTH CONTROL	Princeton/Hadley	Ministry of Forests - Protection Branch (Hall)	To test a specific virus for control of Douglas-fir tussock moth
1.4.5.4	Ss	LEADER CLIPPING FOR SPRUCE WEEVIL CONTROL (PM-V-SW3) Sec. 88	not identified	Ministry of Forests Reg. Protection Br. (Wood)	Operational trial and comparison of slipping and non-clipping
1.4.5.4	Ss	SELECTION OF SITKA SPRUCE GENOTYPES RESISTANT TO SPRUCE WEEVIL	not identified	Ministry of Forests Reg. Protection Br. (Wood)	To propagate resistant genotypes; to plant out resistant clones and assess attack

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.5.4	Ss	DEVELOPMENT OF MENOTERPENE ASSAY METHODOLOGY FOR THE SELECTION OF SITKA SPRUCE GENOTYPES RESISTANT TO SPRUCE WEEVIL	Simon Fraser Univ.	Ministry of Forests Reg. Protection Br. (Wood)	To develop a monoterpene assay for selecting resistant genotypes; to select a range of Ss genotypes
1.4.5.4		CONE AND SEED INSECT MANAGEMENT - SEED ORCHARDS (SX 79300Q)	?		Assessment and control of seed losses in coastal D.-fir
1.4.5.4		AERIAL APPLICATION OF INSECTICIDES (SX 79301Q)	Prince George	Ministry of Forests Silviculture Branch	Not specified
1.4.5.5	Pl	POTENTIALLY DAMAGING DISEASES IN INTENSIVELY MANAGED STANDS OF INTERIOR LODGEPOLE PINE (E.P. 895)	Cariboo	Ministry of Forests Cariboo Res. Sec. - A. Vyse	As in title
1.4.5.5	Pl	THE EFFECTS AND CONTROL OF LODGEPOLE PINE DWARF MISTLETOE IN THE CARIBOO FOREST REGION (E.P. 910)	Cariboo/Chilcotin	Ministry of Forests Research Branch - E. Wilford	To test dead tree filter strips to prevent spread of dwarf mistletoe on cutblock edges
1.4.5.5		PROTECTION OF SECOND-GROWTH STANDS FROM ROOT AND STEM DISEASES (PC-013) INCLUDES: 9 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - G.W. Wallis	To assess the significance of four root disease fungi and to develop sound control measures
1.4.5.5.		DEVELOPMENT OF PEST MANAGEMENT SYSTEMS (PC-40)	?	Can. Forestry Service: PFRC - W. J. Bloomberg	To develop computer system applications to management of 4 major insect and disease pests of stands
1.4.5.5		SPETCH CREEK STUMP PULLING PROJECT (PM-V-RD5)	Squamish	Ministry of Forests Reg. Protection Br. (Wood)	Operational trial on difficult coastal terrain
1.4.5.5.		METHODOLOGY FOR THE DETERMINATION OF "PATHOLOGICAL ROTATION AGE" IN STANDS INFECTED WITH ROOT DISEASES (PM-V-RD6)	not identified	Ministry of Forests Reg. Protection Br. (Wood)	As in title
1.4.5.5		SPRUCE WEEVIL RESEARCH - UBC (PM-V-SW3) Sec. 88	Vancouver Island	Ministry of Forests Reg. Protection Br. (Wood)	To test pine oil as a repellent; to examine dispersal behaviour; to test photography for weevil detection

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.5.5	Pl	RESISTANCE OF LODGEPOLE PINE TO WESTERN GALL RUST	Vancouver	UBC - Forestry - B. van der Kamp	Not specified
1.4.5.5	H	VARIATION IN RESISTANCE OF HEMLOCK TO DWARF MISTLETOE	Vancouver	UBC - Forestry - B. van der Kamp	not specified
1.4.5.5		ROOT DISEASES OF CONIFERS	Vancouver	UBC - Forestry - B. van der Kamp	Not specified
1.4.5.5.	Pw	PRUNING TO CONTROL WHITE PINE BLISTER RUST	Vancouver Island	Canadian Forest Products	To test pruning as a method to control blister rust spread
1.4.5.5	Pw	PROGENY TEST OF BLISTER RUST RESISTANT WHITE PINE	South central Vancouver Island	MacMillan Bloedel - R.C. Bower	Evaluate 'semi-resistant' white pine from the Idaho F1 seed orchard for: blister rust resistance, growth
1.4.5.5	Pw	INHERITANCE OF BLISTER RUST RESISTANCE CHARACTERISTICS	South central Vancouver Island	MacMillan Bloedel - R.C. Bower	Determine if the rust canker inactivation is permanent as suggested by Hungerford
1.4.5.5	Pw	FOREST PROTECTION, WESTERN WHITE PINE BLISTER RUST	Vancouver Island	Pacific Forest Products - R.H. Heath	To breed strains of western white pine resistant to blister rust
1.4.5.5		DEVELOPMENT OF FUNGICIDAL FATTY ACID COMPOUNDS AND MIXTIVES TO CONTROL Botrytis cinerea	Victoria	Intl. Centre for Plant Off Res. (Purich)/Sci. Council of B.C.	To test fungicides for control of Botrytis mold
1.4.5.5	H	HOT WATER SEED TREATMENT (RNX 7977)	Victoria	Ministry of Forests Silviculture Branch	To test hot water x Fusarium infection of Hemlock seeds
1.4.6.0	Lw	CROP TREE THINNING OF WESTERN LARCH, (E.P. 511)	Perry Creek, East Kootenays	Ministry of Forests Nelson Res. Sec. - C.F. Thompson	To determine if thinning can improve growth of western larch

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.6.0		FATE OF NITROGENOUS FERTILIZERS APPLIED TO SNOW (E.P. 870) cf. 1.4.6 PC-57 INCLUDES 4 STUDIES	Spillimacheen, Green Mt.	Ministry of Forests Research Br./CFS-PFRC P.Barker, V. Marshall	To determine the movement and chemical transformation of N. fertilizer on soils for winter fertilizer operations
1.4.6.0		THE EFFECT OF FERTILIZERS ON SELECTED ECOSYSTEMS IN THE CDF AND CWH BIOGEOCLIMATIC ZONES (E.P. 881) INCLUDES 4 STUDIES	Vancouver Island	Ministry of Forests Silviculture Branch - J. Otchere-Boateng	To investigate NH3 volatilization following fall and spring applications of N. fertilizers
1.4.6.0		IMPROVING EARLY GROWTH AFTER OUTPLANTING (E.P. 946) INCLUDES 6 STUDIES	Campbell River	Ministry of Forests Research Branch - R. van den Driessche	As in title
1.4.6.0	Fd, H	AN EVALUATION OF GROWTH RESPONSE TO FERTILIZATION OF DOUGLAS-FIR AND WESTERN HEMLOCK ON THE TOFINO-UCLUELET LOWLANDS. (225-79-3) (Sec. 88 HV 99031)	Tofino/Ucluelet	B.C. Forest Products	As in title
1.4.6.0	Fd	ECONOMIC ANALYSIS OF N. FERTILIZATION OF DOUGLAS-FIR (2-011)	?	C/Z Coast Wood Division - F.T. Leslie	To develop a decision aid that determines the stands to apply N. fertilizer and number of applications
1.4.6.0	H	N. FERTILIZATION OF COASTAL WESTERN HEMLOCK (2-014)	TFL No. 2	C/Z Coast Wood Division - F.T. Leslie	To determine growth response of spaced young stands and evaluate operational cruise techniques
1.4.6.0	Fd, H, Ss	N. FERTILIZATION OF COASTAL MIXED SPECIES (2-014, 2-015)	TFL No. 2	C/Z Coast Wood Division - F.T. Leslie	To determine grwoth response of spaced young stands of mixed species
1.4.6.0	Cw	FERTILIZATION TRIALS - WESTERN RED CEDAR	West coast Vancouver Island	MacMillan Bloedel - R.C. Bower	To determine nutritional response & growth response to urea-sulfur application & evaluate remedial use
1.4.6.0	Fd	FATE OF NITROGEN AND ITS EFFECTS ON PHOSPHORUS IN FOREST SOILS-PLANT SYSTEMS (515-1) (Sec. 88 HV 99006) (see also 1.10.1.0)	Vancouver Island Northwest Bay TFL 20	MacMillan Bloedel - G.E. Nason	To monitor interrelation of nitrogen to P as part of a study of fertilizer needs
1.4.6.0		FERTILIZATION, SOIL EROSION CONTROL AND SITE REHABILITATION	Vancouver Island	Pacific Forest Products - L.D. Husted	To establish research projects to preserve or enhance site and forest productivity

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.6.0	Ss, H	NITROGEN FERTILIZATION OF SITKA SPRUCE - WESTERN HEMLOCK STANDS IN THE QUEEN CHARLOTTES	Queen Charlotte Islands	Ministry of Forests /Western Forest Products	To determine response to fertilizer applied after thinning
1.4.6.0		FOREST FERTILIZATION AND NUTRITION	Interior B.C.	UBC - Forestry - G. Weetman	To assist in nutrient deficiency diagnosis
1.4.6.0	Fd	DOUGLAS-FIR FERTILIZATION PRIORITIES	Vancouver	UBC - Forestry/Soils - T.M. Ballard	To develop a computer programme to predict growth responses; to rank stands, and show where data are needed
1.4.6.0	Fd, H, Pl	AVAILABLE PHOSPHORUS IN FOREST SOILS	B.C.	UBC - Soil Science/For. - T.M. Ballard	To ascertain which analysis technique is most useful for extrapolation to field conditions
1.4.6.0		INDUCING STEM LESIONS (RNX 7974)		Ministry of Forests Silviculture Branch	Test relationship between fertilizing and stem lesions
1.4.6.0		IMPROVING SOLUBLE FERTILIZER SCHEDULE (SX 80208Q)	?	Ministry of Forests Silviculture Branch	To test higher-than-normal fertilizer rates
1.4.6.1	Dr, Fd	EFFECTS OF NITROGEN FIXATION ON FOLIAR NUTRIENT CONCENTRATIONS	South central Vancouver Island	MacMillan Bloedel - R. Bower	To assess the changes in foliar nutrition of the Douglas-fir due to the presence of either alder species.
1.4.6.1		FATE OF BIOLOGICALLY-FIXED NITROGEN (see also 1.10.1.0)	South central Vancouver Island	MacMillan Bloedel - D.E. Binkley	To evaluate application & limitation of using 15N natural abundance approach
1.4.6.1	Dr, Fd	EFFECTS OF ALDER ON SOIL NUTRIENT AVAILABILITY (see also 1.10.1.0)	South central Vancouver Island	MacMillan Bloedel - D.E. Binkley	Assess effects of red alder and Sitka alder on soil nutrient availability
1.4.6.1	Dr, Fd	INTERACTIONS OF ALDER AND DOUGLAS-FIR (552-9) (Sec. 88, HV 99021) (see also 1.4.1.0)	South central Vancouver Island	MacMillan Bloedel - D.E. Binkley	Examine competition between alder and D.fir through removal of the alder and additions of fertilizers

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.6.1	Fd	IMPACTS OF Ceanothus sanguineus ON DOUGLAS-FIR FOLIAR NUTRITION AND SOIL CHEMICAL PROPERTIES (see also 1.10.1.0)	South Vancouver Island	MacMillan Bloedel - D.E. Binkley	Ass the impacts of redstem on foliar nutrition of D.-fir and on soil chemical properties
1.4.6.1		MANAGEMENT OF LEGUMES IN FORESTRY: FIELD SURVEY OF LEGUMES IN COASTAL B.C. (555-2) (Sec.88 HV 99013) (see also 1.10.1.0)	Vancouver Island	MacMillan Bloedel - H.J. Kibbey	As in title
1.4.6.1		ISOLATION AND SELECTION OF Rhizobium spp. (555-3) (Sec. 88 HV 99014)	South Vancouver Island	MacMillan Bloedel - P.C. Simonsen	As in title
1.4.6.1	Fd	MANAGEMENT OF LEGUMES IN FORESTRY: EXPERIMENTAL PLANTING TRIALS - GREEN MANURING (555-4) (Sec. 88 HV 99015) (see also 1.10.1.0)	Vancouver Island	MacMillan Bloedel - H.J. Kibbey	To ascertain effects of introduced legumes on a) soil fertility; b) Douglas-fir seedlings and weeds
1.4.6.1		MANAGEMENT OF LEGUMES IN FORESTRY: EFFECTS OF NATURALLY OCCURRING LEGUMES ON CONIFER GROWTH AND NUTRITION (555-5) (Sec. 88 HV 99016)	South Vancouver Island	MacMillan Bloedel - R. Bower	To ascertain effects of natural legumes on a) soil fertility; b) tree nutrition and growth
1.4.6.1		NITROGEN FIXATION BY NON-VASCULAR PLANTS AND ASSOCIATED MICRO-ORGANISMS	Central Vancouver Island	MacMillan Bloedel - P.C. Simonsen	As in title
1.4.6.1		OVERVIEW SURVEY OF WEST COAST BLUE-GREEN ALGAE: DETERMINATION OF THEIR POTENTIAL VALUE IN FOREST MANAGEMENT	Nanaimo area	MacMillan Bloedel - P.C. Simonsen	As in title
1.4.6.1		ASYMBIOTIC NITROGEN-FIXATION ACTIVITY IN COASTAL B.C. FORESTS	Central Vancouver Island	MacMillan Bloedel - P.C. Simonsen	As in title
1.4.6.1		LICHENS IN COASTAL B.C. FORESTS - AN OVERVIEW (see also 1.10.1.0)	Central Vancouver Island	MacMillan Bloedel - H.J. Kibbey	As in title
1.4.6.1	Dr	EFFECTS OF NITROGEN FIXATION ON BIOMASS PRODUCTION (see also 1.10.1.0)	South central Vancouver Island	MacMillan Bloedel - D.E. Binkley	To assess current rate of nitrogen fixation and biomass production in a young Sitka alder

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.7.0	B	SUBALPINE FIR REGENERATION (E.P. 754)	Kamloops Region	Ministry of Forests Silviculture Branch - (Monchak)	To relate growth to habitat factors, to increase understanding of regenerated characteristics
1.4.7.0		OPERATIONAL PLANTING TRIALS AND REGENERATION PERFORMANCE ASSESSMENT (E.P. 790)	Kamloops Forest Region	Ministry of Forests Kamloops Res. Sec. - M.B. Clark	As in title
1.4.7.0	Pl	INVESTIGATION OF THE CAUSES OF STAGNATION IN LODGEPOLE PINE STANDS (E.P. 850)	Victoria	Ministry of Forests Research Branch - K. J. Mitchell	As in title
1.4.7.0	Pl	INVESTIGATION OF TOPOPHYSIS IN THE REPRESSION OF LODGEPOLE PINE (E.P. 932)	Prince George	Ministry of Forests Research Branch - D. Draper	To evaluate the importance of the apical meristem in influencing height growth response to spacing
1.4.7.0		FALL ROOT PHENOLOGY	East Vancovuer Island	MacMillan Bloedel - B.G. Dunsworth	To quantify fall root activity and correlate with soil moisture & temp. and det. optimal time for fall plant
1.4.7.0		RESISTANCE OF WATER UPTAKE	Vancouver	UBC - Forestry/Soil Sc. - T.M. Ballard	To ascertain treatment effects on leaf and soil water potential, transpiration and water uptake resistance
1.4.7.0	Pl	ECOPHYSIOLOGICAL BASIS FOR GROWTH REPRESSSION IN LODGEPOLE PINE	Vancouver	UBC - Forestry - J. Bassman	To elucidate plant and environmental factors responsible for growth suppression
1.4.7.0	Se, Sw	ENVIRONMENTAL PHYSIOLOGY OF INTERIOR SPRUCE FOLLOWING SEVERAL SITE PREPARATION TREATMENTS	Vancouver	UBC - Forestry - J. Bassman	To determine how site preparation affects phsiological processes in planted spruce
1.4.7.0	Fd	EFFECT OF OVERSTORY REMOVAL ON PHYSIOLOGICAL CONDITION AND GROWTH RESPONSE OF ADVANCE REGENERATION OF INTERIOR DOUGLAS-FIR	Vancouver	UBC - Forestry - J. Bassman	To determine some of the physiological responses of interior D.-fir advance regeneration to shelterwood release
1.4.7.0	Lw	ASPECTS OF THE PHOTOSYNTHETIC PHYSIOLOGY OF SELECTED Larix spp.	Vancouver	UBC - Forestry - J.L. Crane	Not specified

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.7.1	Se, Sw	SPRUCE CONE CROP PERIODICITY (E.P. 618)	Nelson Forest Region	Ministry of Forests Nelson Res. Sec. - C.F. Thompson	To determine those factors which influence cone production
1.4.8.0		DEVELOPMENT AND APPLICATION OF TECHNIQUES FOR THE DIAGNOSIS OF FOREST STAND NUTRIENT STATUS (E.P. 889)	Vancouver	Ministry of Forests Research Branch - T.M. Ballard	As in title
1.4.8.0	Pl	MICRONUTRIENT DEFICIENCIES IN CONIFERS	Interior B.C.	UBC - Soil Science/For. - T.M. Ballard	To relate nutrient deficiencies to soil, site treatment and stock type
1.4.8.0	Sw	NUTRITION OF PLANTED WHITE SPRUCE	Central Interior B.C.	UBC - Forestry/Soils - T.M. Ballard	To relate nutrient deficiencies to soil site treatment and planting stock
1.4.8.0	H	COMPARISON OF HEMLOCK NUTRITION ON VARIOUS MEDIA	Central Interior B.C.	UBC - Forestry/Soils - T.M. Ballard	To compare nutrition of western hemlock on mineral soil, humus and rotting wood
1.4.8.0	H	N and F (sic) RELATIONSHIPS IN SLOWLY-GROWING WESTERN HEMLOCK	Northern Vancouver Island	UBC - Forestry/Soils - T.M. Ballard	To examine P x N interactions in slow growth of hemlock
1.4.8.0		REHABILITATION OF DOUGLAS-FIR PLANTATIONS SHOWING DISTORTED GROWTH	Southwestern B.C.	UBC - Forestry - K. Klinka	As in title
1.4.8.1	Fd	PREDICTION OF NUTRIENT STATUS IN DOUGLAS-FIR BY FOLIAR ANALYSIS (E.P. 643)	Victoria	Ministry of Forests Research Branch - R. van den Driessche	Diagnosis of mineral nutritive status by foliar analyses
1.4.8.1		FOLIAR ANALYSIS STUDIES IN THE PRINCE RUPERT FOREST REGION (E.P. 957)	Prince Rupert	Ministry of Forests Research Branch - Trowbridge, Yole	As in title
1.4.8.1	Fd	RELATIONSHIP OF FOLIAR ANALYSIS DATA WITH HUMUS PROPERTIES	Vancouver	UBC - Forestry - T.M. Ballard	To determine if humus chemistry can predict nutrient status of coastal Douglas-fir

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.4.8.1		FOLIAR ANALYSIS RESEARCH	Vancouver	UBC - Forestry - T.M. Ballard	To improve diagnoses of conifer nutrient deficiencies
1.5.0.0		FOREST BIOMASS MEASUREMENT IN BRITISH COLUMBIA	Vancouver	B.C. Research - A. Tunner	To produce equations for estimating the biomass of tree components in 22 commercial spp.
1.5.0.0		FOREST BIOMASS MEASUREMENT IN YUKON	Vancouver	B.C. Research - A. Tunner	To produce equations for estimating the biomass of tree components in four commercial Yukon species
1.5.1.0	Fd	CORRELATED CURVE TREND STUDIES IN COASTAL DOUGLAS-FIR (E.P. 418, 469, 554) SEE ALSO 1.4.0.0		Ministry of Forests Research Branch - S.A.Y. Omule	As in title
1.5.1.0	Pl	DEVELOPMENT AND APPLICATION OF THE LODGEPOLE GROWTH MODEL (TASS-Pl) (E.P. 850)		Ministry of Forests Research Branch - Goudie, Mitchell	As in title
1.5.1.0		TREE AND LOG QUALITY EVALUATION	Vancouver	FORINTEK - G.R. Middleton	To relate accurately various tree and log characteristics to recoverable wood products
1.5.1.0		BIOMASS PRODUCTIVITY OF WHITE SPRUCE (see also 1.5.3.0)	Vancouver	FORINTEK - L.A. Jozsa	To compare the biomass productivity of white spruce stands, utilizing dendrochronological techniques
1.5.1.0		DIAMETER POINT TAPER SYSTEM	Victoria	D. Ormerod, Victoria/ Sci. Council of B.C	To develop a low-cost taper estimate in lumber trees
1.5.1.0		FOREST GROWTH AND YIELD MODELS	Vancouver	UBC - Forestry - D.D. Munro	To develop specific models for intensive management activities
1.5.1.0		DEVELOPMENT OF AN IMPROVED SYSTEM TO ESTIMATE THE PRESENTLY-USED DECAY, WASTE AND BREAKAGE LOSS FACTORS (see also 1.6.1.4)	Vancouver	UBC - Forestry - A. Kozak	To determine loss of bark during logging and transportation of logs to the millyard

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.5.1.0		BARK LOSSES DURING EXTRACTION AND TRANSPORT (see also 1.8.1.0)	Vancouver	UBC - Forestry - A. Kozak	To compare different extraction and transport systems in terms of loss of bark
1.5.1.0		WOOD AND BARK VOLUME ESTIMATION	Vancouver	UBC - Forestry - A. Kozak	To improve estimates of wood and bark volumes
1.5.2.0		THE SIMULATION OF LANDSAT-D AND AN ASSESSMENT OF ITS CAPABILITIES FOR THE INVENTORY AND ASSESSMENT OF WETLANDS FOR MANAGEMENT PURPOSES (E.P. 905)	Vancouver	Ministry of Forests Research Branch - G.F. Tomlins	As in title. See also 1.10.1.0
1.5.2.0		RESEARCH DEVELOPMENT AND APPLICATION OF IMAGE PROCESSING TECHNIQUES TO FORESTRY PROBLEMS (PC-64) (see also 1.4.5.3 and 1.4.5.4)	B.C. & Yukon	Can. Forestry Service: PFRC - F.G. Peet	As in title
1.5.2.0		REMOTELY PILOTED AIRCRAFT - AN INEXPENSIVE OPTION FOR LARGE-SCALE AERIAL PHOTOGRAPHY IN FOREST APPLICATIONS	Near Victoria	B.C. Research - G.F. Tomlins	Assessment of small-format, large-scale photography for mapping centres of root rot in a research study area
1.5.2.0	Fd	PHOTO INTERPRETATION OF DOUGLAS-FIR NUTRIENT STATUS (see also 1.4.8.0)	Vancouver	UBC - Forestry - P.A. Murtha	To detect Douglas-fir foliage nutrient status from color I.R. air photos
1.5.2.0		PHOTO INTERPRETATION OF EXTRA VISUAL DETECTION OF DAMAGE	Vancouver	UBC - Forestry - P.A. Murtha	To analyze color I.R. air photos for pre-visual damage detection
1.5.2.0		ANALYSIS OF SCALE CHANGES ON DETECTION OF MOUNTAIN PINE BEETLE INFESTATION (see also 1.4.5.4)	Vancouver	UBC - Forestry - P.A. Murtha	To determine how scale changes affect interpretation of air photos and multi-spectral line scan data
1.5.2.0		PRECISION RECTIFICATION OF SATELLITE IMAGERY USING DIGITAL TERRAIN MODELS	Vancouver	UBC - Forestry - R.J. Woodham	To develop automatic techniques to account for image distortions and variations
1.5.2.0		AUTOMATIC VERIFICATION OF FOREST COVER MAPS USING MACHINE READABLE FOREST COVER MAPS	Vancouver	UBC - Forestry - R.J. Woodham	To combine Landsat and computer maps so as to predict needs for revision

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.5.2.0		EXACT REPRODUCTION AND ENHANCEMENT OF COLOUR IMAGES	Vancouver	UBC - Forestry - R.J. Woodham	To calibrate computer based image systems for exact reproduction
1.5.2.0		IMAGE ANALYSIS USING DIGITAL TERRAIN MODELS	Vancouver	UBC - Forestry - R.J. Woodham	To improve interpretation of ground cover by correcting for induced changes of brightness
1.5.2.0		EXAMINING 70mm PHOTOGRAPHY FOR STAND TESTING (SX 7802)	Vancouver	Ministry of Forests Silviculture Branch	Assess suitability of 70mm photos for estimating stand density
1.6.0.0		FELLER DIRECTOR (2.1)	Prince George	FERIC - D.C. Moulson	Prototype machine to cut 36-inch trees
1.6.0.0		CHAINSAW CHAIN (2.2)	Vancouver	FERIC - D.C. Moulson	To improve the cutting characteristics and reduce the power requirements of mechanical felling heads
1.6.0.0		FELLING MACHINE CARRIERS (2.3)	Vancouver	FERIC - D.C. Moulson	A survey of carriers available for carrying felling heads to determine their capabilities
1.6.0.0		COAST MECHANIZED FELLING TRIALS (11.2)	Campbell River	FERIC	To experiment with new systems using feller bunchers and processors to log second growth timber
1.6.0.0		REDUCTION OF FELLING BUTT DAMAGE (2.4)	Vancouver	FERIC - D.C. Moulson	To develop and test devices to minimize losses due to butt damage
1.6.0.0		SILVICULTURAL SYSTEMS (see also 4.2.0.0)	Queen Charlotte Islands	Poulin & Associates, Vancouver	Addressing the effect of logging on unstable slopes
1.6.0.0		NOISE AND VIBRATION REDUCTION ON CHAIN SAW CUTTING ATTACHMENT	Vancouver	Windsor Machine Ltd. - (Lim)/Sci. Council of B.C.	To quieten chain saws and to reduce vibration

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.6.0.0		EFFECTS OF HARVESTING AND SITE PREPARATION PRACTICES ON FOREST RESOURCES (PC-25) INCLUDES: 2 STUDIES (see also 1.3.1.2)	Queen Charlotte Islands	Can. Forestry Service: PFRC - R.B. Smith	To identify, elucidate and measure the effects of harvesting and site preparation on forest resources
1.6.1.1		IMPROVED CHAIN SAWS FOR FELLING HEADS	Vancouver	FORINTEK - T.A. McLauchlan	Improved chain saws for use as felling heads, which have greater cutting rates and improved service.
1.6.1.3		CARNATION CREEK EXPERIMENTAL WATERSHED PROJECT	Carnation Creek	Fish. & Oceans/CFS:PFRC - G. Hartman/R.B. Smith	Effects of forestry practices on fish habitat; changes in hydrology; soil erosion and forest growth
1.6.1.3		EFFECTS OF HARVESTING AND SITE PREPARATION PRACTICES ON FOREST RESOURCES AND VALUES (PC-25)	Okanagan, Vancouver Island	Can. Forestry Service: PFRC - R.B. Smith	To identify, measure and elucidate the effects of harvesting and site preparation practices on resources
1.6.2.1		REGULATION OF PARTIALLY-CUT STANDS	Vancouver	UBC - Forestry - J.H.G. Smith	By case studies of past cutting to improve regulation and control of partial cutting
1.6.2.2	C, H, L, Fd, Pw	PARTIAL CUTTING STUDY IN THE COLUMBIA FOREST ZONE (E.P. 370)	Frosthall Creek T.F.L. 23	Ministry of Forests Nelson Res. Sec. - C.F. Thompson	To investigate the response of a mixed immature stand after three intensities of partial cutting
1.7.0.0		QUEEN CHARLOTTE ISLANDS STUDY (4.1)	Queen Charlotte Islands	FERIC - M. Nagy E.A. Sauder	A study of ways to reduce the mass wasting from logging
1.7.0.0		YARDING STUDIES (6.0)	Vancouver	FERIC - E.A. Sauder	To improve the efficiency of yarding
1.7.0.0		ALTERNATE YARDING SYSTEMS	Queen Charlotte Islands	Poulin & Associates	Addressing the effect of logging on unstable slopes
1.7.1.0		CARNATION CREEK EXPERIMENTAL WATERSHED PROJECT (see also 1.6.1.3)	Carnation Creek	Fish. & Oceans/CFS:PFRC - G. Hartman/R.B. Smith	Effects of forestry practices on fish habitat; changes in hydrology; soil erosion and forest growth

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.7.1.0		IMPROVED GRAPPLE YARDING	Vancouver	MacMillan Bloedel Wood Harvesting Research - P.L. Cottell	Develop video transmitter system for effective grapple yarding in rough terrain
1.7.1.0		EVALUATION OF MAN-MACHINE PERFORMANCE IN FOREST HARVESTING	Vancouver	MacMillan Bloedel Wood Harvesting Research - P.L. Cottell	To improve efficiency in certain forest situations and to reduce the human costs of inadequate safety
1.7.1.0		ELECTRONIC DATA LOGGER FOR MAN/MACHINE EVALUATION	Vancouver	MacMillan Bloedel-Wood Harvest. Res./UBC-Elec. Eng. - Cottell/Lawrence	As in title
1.7.2.0	Pl	LODGEPOLE PINE DISTRIBUTION WITH RELATION TO LOGGING BY FELLER-BUNCHER/GRAPPLE-SKIDDER LOGGING (E.P. 820) SEE ALSO ENTRY 1.3.2.1	Kamloops Region	Ministry of Forests Kamloops Res. Sec. - M.B. Clark	To determine natural regeneration success following feller/buncher/ grapple skidder logging
1.7.2.0	Fd	EXPLORATORY STUDY OF LOGGING AND ATV DAMAGE IN DRY BELT DOUGLAS-FIR (E.P. 829)	Pending	Ministry of Forests Kamloops Res. Sec. - M.B. Clark	(See 1.4.5.2 above, E.P. 829)
1.8.0.0		LANDSORT DEBRIS (10.1)	Vancouver	FERIC - A.W.J. Sinclair M.A. Pottic	To investigate ways to dispose of or utilize debris
1.8.0.0		BIOMASS HANDLING AND TRANSPORT (10.2)	Vancouver	FERIC - A.W.J. Sinclair	To investigate techniques for collection of logging residues
1.8.1.0		ROCKWORK - DRILLING AND BLASTING (1.1)	Vancouver	FERIC - R. Krag	To develop and test a field method to identify rock and drilling methods and etc. for various rock
1.8.1.0		ROAD CONSTRUCTION - BALLAST AND SURFACE MATERIALS (1.2)	Vancouver	FERIC - M. Nagy	To identify and evaluate the quality of materials available
1.8.1.0		LOG TRUCK STUDIES (7.1)	Vancouver	FERIC - D.G. Smith	To investigate ways to improve log hauling

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1.8.1.0		TRUCK UNLOADING (7.2)	Vancouver	FERIC - B. McMorland	To improve the efficiency, reduce truck delay times and reduce log breakage during unloading
1.8.1.0		OPTIMIZING HAUL ROAD CONSTRUCTION AND TRUCK LOGGING	Vancouver	MacMillan Bloedel - P.L. Cottell	not specified
1.8.1.0		ROAD RECORDER MODIFICATIONS	Victoria	Ministry of Forests - Engineering Branch	To conduct high speed road surveys
1.8.1.0		SIMULATED LOG HAUL PROGRAM	Victoria	Ministry of Forests - Engineering Branch (Bonfonti)	To calculate haul times from data recorded by the road recorder and surveyers
1.8.2.0		SUBSTITUTE BOOMSTICKS (8.2)	Vancouver	FERIC - D.G. Smith	To test concrete boomsticks
1.8.2.0		SORTYARD DESIGN STUDY (8.4)	Vancouver	FERIC - A.W.J. Sinclair	not specified
1.8.2.0		WATERBORNE DEBRIS (10.3)	Vancouver	FERIC - A.W.J. Sinclair M.A. Pottic	To develop and test methods for recovering and using wood 'lost' in water transport or storage
1.8.2.0		WATER TRANSPORT ALTERNATIVES	Vancouver	FERIC - D.G. Smith	To investigate the development of a small submersible log barge to carry logs through rough water
1.8.2.0		WATER TRANSPORT OF LOGS	Vancouver	MacMillan Bloedel - P. L. Cottell	To determine least total cost log transport system, considering handling, transport and losses
1.8.3.3		CYCLO-CRANE DEVELOPMENT (4.2) (see also 4.2.0.0)	Oregon	FERIC - D.Y. Guimier	To develop a substitute for large helicopters for logging

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1.8.3.3		AERIAL HARVESTING OF PRESENTLY INACCESSIBLE TIMBER	Vancouver Island	MacMillan Bloedel, Tahsis, B.C.F.P., Pacific Logging	Develop aerial logging vehicle safer and cheaper than helicopter
1.9.0.0	H	LONG-TERM LOAD BEARING CAPACITY OF HEMLOCK DIMENSION LUMBER	Vancouver	FORINTEK - R.O. Foschi	To complete long-term study on the load bearing capacity of hemlock dimension lumber
1.9.0.0		RELIABILITY OF WOOD STRUCTURAL SYSTEMS	Vancouver	FORINTEK - R.O. Foschi	To develop and verify structural analysis models for predict. the static, dynamic behaviour of wood structures
1.9.0.0		DURATION OF LOAD IN TIMBER FASTENERS	Vancouver	FORINTEK - L.C. Palka	To develop long-term data relating to the strength of truss plate- wooden connections
1.9.0.0		PREDICTION OF LUMBER STRENGTH	Vancouver	FORINTEK - M. Samson	To develop nondestructive techniques for the reliable estimation of lumber strength
1.9.1.0		BENDING STRENGTH AND STIFFNESS OF CANADIAN SOFTWOOD LUMBER	Vancouver	FORINTEK - J.D. Barrett	To evaluate the bending strength and stiffness of the various grades and sizes of Canadian softwood lumber
1.9.1.0		COMPRESSION STRENGTH AND STIFFNESS OF CANADIAN SOFTWOOD LUMBER	Vancouver	FORINTEK - J.D. Barrett	To evaluate the compression strength and stiffness of various grades and sizes of Canadian softwood lumber
1.9.1.0		TENSION STRENGTH AND STIFFNESS OF CANADIAN SOFTWOOD LUMBER	Vancouver	FORINTEK - J.D. Barrett	To evaluate the tension strength and stiffness of various grades and sizes of Canadian softwood lumber
1.9.1.0	Fd	BENDING STRENGTH AND STIFFNESS OF DOUGLAS-FIR LUMBER FROM THE FUTURE FOREST	Vancouver	FORINTEK - (Barrett)/ Sci. Council of B.C.	To determine physical characteristics of second-growth lumber for comparative evaluation
1.9.1.0		IMPROVED SAW GRINDING PROCEDURES	Vancouver	FORINTEK - T. Bonac	To develop saw grinding techniques and spark deposition for surface coating of saw gullets

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1.9.1.0		EFFECT OF BANDSAW PRESSURE GUIDES ON BLADE LIFE AND SAWING ACCURACY	Vancouver	FORINTEK - T. Bonac	To evaluate the influence of guide wear on the life and sawing accuracy of bandsaw blades
1.9.1.0		REDUCTION OF CHIPPING TEAR-OUT BY KNIFE MICROBEVELING	Vancouver	FORINTEK - T. Bonac	To optimize those parameters which will reduce the depth of torn-out grain in log-chipping, etc.
1.9.1.0		FRACTURE MECHANICS, SLOW CRACK GROWTH IN WOOD	Vancouver	FORINTEK - R.O. Foschl	To develop and evaluate mathematical models for crack propagation in wood relevant to duration of load effects
1.9.1.0		IMPLEMENTATION OF STELLITE-TIPPED SAW TECHNOLOGY	Vancouver	FORINTEK - E.D. Kirbach	To resolve problems associated with the commercial implementation of stellite-tipped saws
1.9.1.0		SELF-SHARPENING SAW TEETH AND WAFERIZING KNIVES	Vancouver	FORINTEK - E.D. Kirbach	To utilize the self-sharpening principle for extending the sharpness life of saw teeth & wood cutting tools
1.9.1.0		VARIATION IN MOISTURE METER READING	Vancouver	FORINTEK - J.F.G. Mackay	To assess and correct errors in the use of resistance moisture meters
1.9.1.0		RAPID DRYING OF SOFTWOODS IN SUPERHEATED STEAM	Vancouver	FORINTEK - J.F.G. Mackay (BCSC)	To determine the conditions which dry two-inch framing softwood lumber with a minimum degrade
1.9.1.0		NEW BAND SAW TENSIONING METHOD	Vancouver	FORINTEK - T.A. McLauchlan	To develop techniques for tensioning band saws in situ
1.9.1.0		GREEN TRIMMER EFFICIENCY ANALYSIS	Vancouver	FORINTEK - R.W. Nielson	To evaluate the performance of commercially-available green trimmers
1.9.1.0		PROCESS CONTROL FOR IMPROVED LUMBER RECOVERY	Vancouver	FORINTEK - R.W. Nielson	To evaluate the capabilities of available process control equipment

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.1.0		UTILIZATION OF BEETLE-KILLED LODGEPOLE PINE	Vancouver	FORINTEK - R.W. Nielson	To review existing data relative to the salvage and utilization of mountain pine beetle-killed Lodgepole pine
1.9.1.0		ASSESSMENT OF COMPUTER-CONTROLLED SAWMILL TECHNOLOGY	Vancouver	FORINTEK - R.W. Nielson	To assess the "state-of-the-art" of computer-controlled sawmill processing technology
1.9.1.0		EDGE GLUING OF SPRUCE-PINE-FIR LUMBER WITH LIGHT COLORED ADHESIVES	Vancouver	FORINTEK - G.E. Troughton	To develop a rapid method for manufacturing strong edge joints from lumber using light-colored adhesives
1.9.1.0		FINGERJOINTING	Vancouver	FORINTEK - G.E. Troughton	To establish techniques for preparing fingerjoints by the preheating method using light-colored glues
1.9.1.0		MILL FLOW ANALYSIS USING QUEUEING THEORY	Vancouver	FORINTEK - S. J. Wang	To develop mill flow analysis procedures to account for time-dependent variables
1.9.1.0		THE EFFECTS OF PROCESSING RATE AND PRODUCT RECOVERY ON MILL PROFIT	Vancouver	FORINTEK - S.J. Wang	To develop procedures for making trade off decisions based on the total profit concept
1.9.1.0		WOOD MACHINING	Vancouver	UBC - Forestry - N.C. Franz	To improve quality and efficiency in manufacturing
1.9.1.0		DEVELOPMENT OF MORE EFFICIENT WOOD CUTTING PROCEDURES	Vancouver	UBC - Mechanical Eng. - S. G. Hutton	To improve cutting efficiency in band saws and circular saws
1.9.1.0		TO STUDY LUMBER STRENGTH PROPERTIES IN THE JOINT PROJECT (in conjunction with M. Kharaldy)	Vancouver	UBC - Civil Eng. - B. Madsen	Not specified
1.9.1.0		TO ESTABLISH REALISTIC STRENGTH PROPERTIES FOR LUMBER AND TIMBER: ALLOWING FOR VARIATIONS IN DURATION OF STRESS, MOISTURE CONTENT, GRADING	Vancouver	UBC - Civil Eng. - B. Madsen	Also in-grade testing

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.1.0		MICROWAVE ELECTRONIC GRADING OF LUMBER	Vancouver	UBC - Civil & El. Eng. - M. Kharadly, B. Madsen	To look at how effective microwaves can be in detecting the slope of grain in lumber
1.9.1.0		CRACK GROWTH IN WOOD	Vancouver	UBC - Metal. Eng. - J.S. Nadeau/Sci. Council of B.C.	To ascertain how cracks develop in wood under environmental or mechanical stress
1.9.1.0		LOG SCALING BY COMPUTER IMAGE PROCESSING	Vancouver	UBC - Elec. Eng. - (Lawrence)/Sci. Council of B.C.	To develop a microprocessor image analyses for rapid log volume determination
1.9.1.0		IMPROVED LUMBER YIELD BY COMPUTER INTERPRETATIONS OF CROSS-SECTIONAL X-RAYS OF LOGS	Vancouver	Simon Fraser University - Computing Sci. (Funt)/ Sci. Council of B.C.	To develop a methodology for detection of defects prior to sawing
1.9.1.0		DEVELOPMENT OF CIRCULAR SAW THERMAL TENSIONING GUIDES	Vancouver	Mitten & Associates - (Brdicke)/Sci. Council of B.C.	To improve cutting accuracy of circular saws to improv utilization efficiency
1.9.1.0		ROCK DETECTION IN LOGS	Vancouver	MacMillan Bloedel Res. - (Aune)/ Sci. Council of B.C.	To develop x-ray absorption and fluorescent detection of rocks prior to sawing
1.9.1.0		DETECTION AND CONTROL OF SAWING VARIATION WITH BANDSAWS	Vancouver	MacMillan Bloedel Res. - (Welsh)/Sci. Council of B.C.	To improve bandsawing efficiency through microprocessor control
1.9.1.0		THE CONTROL OF SAP STAIN IN GREEN LUMBER	Vancouver	MacMillan Bloedel Res. - (Plackett)/Sci. Council of B.C.	To find an effective chemical control to protect lumber during overseas shipment
1.9.2.0		MODIFICATIONS TO VENEER PEELING EQUIPMENT	Vancouver	FORINTEK - D.C. Walser	To evaluate a Forintek-developed lathe chuck for peeling western softwoods
1.9.2.0		RESEARCH AND DEVELOPMENT OPTIONS FOR THE PLYWOOD INDUSTRY	Vancouver	FORINTEK - M.R. Clarke	To identify present and future product and process options which may be enhanced through appropriate R&D

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1.9.2.0		COMPUTER CONTROL OF VENEER LATHES	Vancouver	FORINTEK - D.C. Walser	To develop sensors for measuring those variables affecting lathe performance re computerization
1.9.2.1		A TORSION SHEAR METHOD FOR STUDYING WOOD-ADHESIVE INTERACTION	Vancouver	FORINTEK - P.R. Steiner	To assess the interaction between wood and various adhesives under differing environmental conditions
1.9.2.1		MODIFIED BARK AS AN ADHESIVE FOR COMPOSITE PANELS	Vancouver	FORINTEK - P.R. Steiner	To produce bark adhesives for panels by modification with isocyanate or phenol formaldehyde resins
1.9.2.1		COMPARISON OF LIQUID AND POWDERED PHENOLIC RESINS FOR WAFERBOARD MANUFACTURE	Vancouver	FORINTEK - P.R. Steiner	To assess the distribution & strength properties of waferboards bonded with powdered and liquid resins
1.9.3.0		SYNTHESIS OF CHEMICAL STANDARDS FOR PULP AND PAPER RESEARCH	Vancouver	B.C. Research - B. McKague	To prepare pure samples of wood extractives, chlorinated phenols and other organic compounds
1.9.3.0		IDENTIFICATION OF MUTAGENIC SUBSTANCES IN BIO-TREATED WHOLE MILL EFFLUENT FROM BLEACHED KRAFT PULP AND PAPER MILLS IN B.C.	Vancouver	B.C. Research - B. McKague	To isolate and identify mutagenic compounds in bio-treated whole mill effluent
1.9.3.0		CULTIVATION OF OYSTER MUSHROOMS (Pleurotus sajor-caju) ON PULP MILL SLUDGE	Vancouver	B.C. Research - J.C. Mueller	To develop a process for production of nutritious oyster mushrooms using fibrous sludges
1.9.3.0		MANUFACTURE OF NAPHTHOQUINONE, TETRAHYDROANTHRAQUINONE AND ANTHRAQUINONE	Vancouver	B.C. Research - K. Oehr	To develop improved technology for the manufacture of THAQ and anthraquinone wood pulping additives
1.9.3.0		DEVELOPMENT OF NOVEL COLOUR REMOVAL PROCESS FOR KRAFT MILL EFFLUENTS	Vancouver	B.C. Research/Techwest - G. Esplin	As in title
1.9.3.0		EFFECTS OF CHIP QUALITY IN PULP PRODUCTION	Vancouver	PPRIC (c/o FORINTEK) - J.V. Hatton	To determine the effects of chip size and contaminants (bark, etc.) on yield & quality of chemical & mech. pulp

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.3.0		REFINER MECHANICAL PULPS FROM CANADIAN FIBRE SOURCES	Vancouver	PPRIC (c/o FORINTEK) - J.V. Hatton	To determine the effects of different species and processes on yield and properties of mechanical pulp
1.9.3.0		INCREASED HARDWOOD USAGE IN CHEMICAL PULPING	Vancouver	PPRIC (c/o FORINTEK) - K. Hunt, J.V. Hatton	To increase hardwood usage and expand the fibre resource base
1.9.3.0		UTILIZATION OF DEAD WOOD IN PULPING	Vancouver	PPRIC (c/o FORINTEK) - J.V. Hatton, K. Hunt	To determine fibre losses, to develop field assessment of damage and to improve utilization of S-D wood
1.9.3.0		FLUID MECHANICS OF FIBRE SUPSPENSIONS: MEASUREMENT OF FIBRE FLEXIBILITY, PULP FLOCCULATION IN TURBULENT FLOW, MIXING IN PULP SUSPENSIONS	Vancouver	PPRIC (c/o Chem. Eng.-UBC) - R.J. Kerekes	To improve knowledge of and, hence, efficiency in pulp technology
1.9.3.0		IMPROVED EFFICIENCY IN TALL OIL PRODUCTION	Prince George	PPRIC - V. Uloth, M.D. Ouchi, A. Wong	To determine the potential of additives as tall oil phase separation aids
1.9.3.0		IMPROVED REFINER PLATE DESIGN TO REDUCE ENERGY AND IMPROVE LOADABILITY IN ROTATING DISC WOOD REFINERS (TMP)	Vancouver	MacMillan Bloedel Res. - (Leith)/Sci. Council of B.C.	To reduce energy requirements in thermomechanical pulping
1.9.3.0	Cw	CEDAR MECHANICAL PULP IN NEWSPRINT	Vancouver	MacMillan Bloedel Res. - (Mackie)/Sci. Council of B.C.	To develop a practical brightening process for cedar pulp
1.9.3.0		ELECTROSYNTHESIS OF ALKALINE PEROXIDE SOLUTION	UBC	UBC- Chem. Eng. - C. Oloman	Objectives not given - see titles
1.9.3.0		ELECTROSYNTHESIS OF SODIUM HYDROSULPHITE	UBC	UBC- Chem. Eng. - C. Oloman	Objectives not given - see titles
1.9.3.0		ELECTROLYTIC REMOVAL OF SODIUM CHLORIDE FROM BLACK LIQUOR	UBC	UBC- Chem. Eng. - C. Oloman	Objectives not given - see titles

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.3.0		ELIMINATION OF THE RECAUSTICIZING STEP IN PULP MILLS	Vancouver	UBC - Chem. Eng. - (Pinder)/Sci. Council of B.C.	To modify pulping processes to reduce energy needs and effluent discharge
1.9.3.0		PLATE POSITION CONTROL OF TMP REFINER TO FACILITATE AUTOMATIC COMPENSATION FOR ANOMALIES	UBC	UBC - Elec. Eng. - M. Davies	To apply a self-tuning control algorithm to the control of plate position
1.9.3.0		ENERGY USAGE IN PULP AND PAPER MILLS	UBC	UBC - Elec. Eng. - M. Davies	To establish optimum generating strategies for any given mill demand
1.9.3.0		CHIPPING STUDIES (FOR PULPING)	Vancouver	UBC - Forestry - N. Franz	Not specified
1.9.4.0		CREEP OF COMMERCIAL WAFERBOARD	Vancouver	FORINTEK - L.C. Palka	To plan and initiate a study related to the creep and creep rupture behaviour of commercial waferboard
1.9.4.0		IMPROVING THE PERFORMANCE OF WAFERIZING AND VENEER CUTTING KNIVES	Vancouver	FORINTEK - D.C. Walser	To examine coating techniques for reducing the rate at which knives are dulled during waferizing or veneer cut
1.9.5.1		RE-USE OF UTILITY POLES	Vancouver	FORINTEK - A.J. Cserjesi	To evaluate a soil sterilization technique which permits relocation of used utility poles
1.9.5.1		NONDESTRUCTIVE EXAMINATION OF UTILITY POLES	Vancouver	FORINTEK - J.N.R. Ruddick	To evaluate an acoustic scanning technique for detection of dry rot in utility poles
1.9.5.4		THE TREATMENT OF INTERNAL DECAY IN POLES	Vancouver	FORINTEK - A.J. Cserjesi	To examine the efficacy of various fumigants for arresting internal decay in utility poles
1.9.5.4		VALUATION OF GROUNDLINE PRESERVATIVES	Vancouver	FORINTEK - J.A. Ruddick	To examine field techniques for enhancing the protection of utility poles against biodeterioration

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.6.0		IDENTIFICATION OF IMPORTANT CANADIAN WOOD	Vancouver	FORINTEK - E.P. Swan	To develop chemical color tests for differentiating commercial woods, which are applicable in the sawmill
1.9.6.0	Ac	PROPERTIES OF BLACK COTTONWOOD AND BALSAM POPLAR	Vancouver	FORINTEK - E.P. Swan	To confirm the identical nature of these two species
1.9.6.0		CHEMICALS FROM FOREST PRODUCTS BY SUPERCRITICAL FLUID EXTRACTION	Vancouver	B.C. Research - E. McDonald, J. Howard	a) To determine the composition and potential utility of oils obtained by supercritical fluid extraction
1.9.6.0		CHEMICALS FROM FOREST PRODUCTS BY SUPERCRITICAL FLUID EXTRACTION	Vancouver	B.C. Research - E. McDonald, J. Howard	b) To participate in the I.E.A.'s evaluation of biomass liquefaction of poplar wood feedstock
1.9.6.0		CHEMICALS FROM FOREST PRODUCTS BY SUPERCRITICAL FLUID EXTRACTION	Vancouver	B.C. Research - E. McDonald, J. Howard	c) To increase the accessibility of wood carbohydrates to cellulose enzymes through cell wall modif.
1.9.6.0		CHEMICALS FROM FOREST PRODUCTS BY SUPERCRITICAL FLUID EXTRACTION	Vancouver	B.C. Research - E. McDonald, J. Howard	d) To compare yields and quality of wood extractives obtained by SFE and conventional methods
1.9.6.0		NEW CELLULOSE BASED POLYMERS FOR INDUSTRIAL APPLICATIONS	Vancouver	B.C. Research - M. Yalpani, J. Howard	To increase the industrial uses of wood cellulose through preparation of novel, branched polysaccharide deriv.
1.9.6.0		DEVELOPMENT OF SAMPLING AND ANALYTICAL PROCEDURES FOR BIOMASS GASIFIERS	Vancouver	B.C. Research/Techwest - G. Esplin	As in title (ENFOR Program)
1.9.6.0		WORKBOOK OF GASIFIER SAMPLING METHODOLOGY	Vancouver	B.C. Research/Techwest - G. Esplin	As in title (ENFOR Program)
1.9.6.0		FORT PROVIDENCE GASIFIER SAMPLING	Ft. Providence & Vancouver	B.C. Research/Techwest - G. Esplin	Trouble shooting (ENFOR Program)

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.6.0		WOOD CHEMISTRY: CHEMICALS FROM WOOD	Vancouver	UBC - Forestry - L. Paszner	a) To develop a catalyzed organosol extraction alternative to sulphur pulping
1.9.6.0		WOOD CHEMISTRY: CHEMICALS FROM WOOD	Vancouver	UBC - Forestry - L. Paszner	b) To develop ultra-high efficiency hydrolysis of wood to component chemicals
1.9.6.0		WOOD PRODUCTS	Vancouver	UBC - Forestry - L. Paszner	a) To develop new mineral banded building products
1.9.6.0		WOOD PRODUCTS	Vancouver	UBC - Forestry - L. Paszner	b) To elucidate adhesives applicatic of natural lignins
1.9.7.0		FOREST PRODUCT BASED SACRIFICIAL AGENTS FOR ENHANCED OIL RECOVERY	Vancouver	B.C. Research - J. Howard	To evaluate selected silvichemicals and appropriate derivatives for use in tertiary oil recovery systems
1.9.7.0		DEVELOPMENT OF ANALYTICAL METHODOLOGY FOR BIOMASS GASIFICATION PRODUCTS	Vancouver	B.C. Research/Techwest - G. Espiin	To develop a standard procedure for the collection, separation and analysis of raw producer gas
1.9.8.0		INTENSIVE FORESTRY PRACTICES AND WOOD QUALITY (E.P. 871) SEE ALSO ENTRY (1.4.0.0)	Victoria	Ministry of Forests Research Branch - K. Illingworth	As in title
1.9.8.0		NONDESTRUCTIVE METHODS FOR DETECTING INTERNAL DECAY IN UTILITY POLES	Vancouver	FORINTEK - A.J. Cserjesi	To examine the validity of nondes-tructive techniques for determining the internal decay in utility poles
1.9.8.0		ANALYSIS OF POTENTIAL PROBLEMS IN UTILIZING TREES FROM INTENSIVELY MANAGED CONIFEROUS FORESTS IN WESTERN CANADA	Vancouver	FORINTEK - R.M. Kellogg	To identify the most serious wood quality problems associated with the ... as in title
1.9.8.0		BIN AND SILO DESIGN FOR BIOMASS MATERIALS	Vancouver	B.C. Research - N. Bundall	To determine factors affecting flowability of biomass materials and critical bin & silo parameters

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.8.0		DEVELOPMENT OF A DENSE PHASE PNEUMATIC CONVEYING SYSTEM FOR HOG FUEL	Vancouver	B.C. Research - N. Bundalli	As in title
1.9.8.0		HIGH ENERGY FLUID JET CUTTING	Vancouver	UBC - Forestry - N.C. Franz	To develop and improve a unique machining process for forest industrial application
1.9.9.0		FEASIBILITY OF A FACILITY FOR ACCELERATED BIODETERIORATION	Vancouver	FORINTEK - A. Byrne	As in title - ...for the examination of preservative treated wood
1.9.9.0		PROTECTION OF WOOD PRODUCTS AGAINST SAPSTAIN AND DECAY	Vancouver	FORINTEK - A. J. Cserjesi	To develop fungicide combinations effective in preventing sapstain on lumber
1.9.9.0		BIOPROTECTION OF WOODEN SHINGLES AND SHAKES	Vancouver	FORINTEK - A.J. Cserjesi	To improve the service life of commercial shingles and shakes
1.9.9.0		DEVELOPMENT OF ALTERNATE WOOD PRESERVATIVES AGAINST BIODETERIORATION	Vancouver	FORINTEK - J.N.R. Ruddick	To examine organotin and modified alkyl-ammonium compounds as alternate for the protection of wood
1.9.10.0		EMPLOYEE/EMPLOYER EDUCATION IN INDUSTRIAL HEALTH	Vancouver	B.C. Research - J. Leach	Produce and present educational materials on occupational health in the B.C. forest products industry
1.9.10.0		GAS ALARMS AT KRAFT MILLS	Kraft Mills in B.C.	B.C. Research - J. Leach	Review the state-of-the-art of hydrogen sulphide and chlorine gas alarms used at kraft mills
1.9.10.0		REACTIONS BETWEEN GASES IN KRAFT MILL WORK AREAS	Kraft Mills in B.C.	B.C. Research - J. Leach	Identify hazardous products from chemical reactions between various process and by-product gases
1.9.10.0		BIOLOGICAL CONTAMINANTS IN THE WORKPLACE ATMOSPHERE AT KRAFT MILLS	Kraft Mills in B.C.	B.C. Research - J. Leach	Detect, identify, and count pathogenic bacteria and moulds at kraft mills to determine risks to health

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.10.0		CHARACTERIZATION OF LIME AND PAPER MACHINE DUST IN THE WORKPLACE ATMOSPHERE AT KRAFT MILLS	Kraft Mills In B.C.	B.C. Research - J. Leach	Measure respirable, inhalable, and total concentration of lime and pape machine dusts and if endangers healt
1.9.10.0		CEDAR DUST STUDIES STUDIES AT PLYWOOD PLANTS	Cedar Sawmills In B.C.	B.C. Research - J. Leach	a) Measure respirable, inhalable, and total dust concentrations under winter operating conditions
1.9.10.0		CEDAR DUST STUDIES STUDIES AT PLYWOOD PLANTS	Cedar Sawmills In B.C.	B.C. Research - J. Leach	b) Characterise airborne particles that are now reported as cedar dust
1.9.10.0		CEDAR DUST STUDIES STUDIES AT PLYWOOD PLANTS	Cedar Sawmills In B.C.	B.C. Research - J. Leach	c) Determine if there is a relationship between dust and allergies experienced by employees at mills
1.9.10.0		CEDAR DUST STUDIES STUDIES AT PLYWOOD PLANTS	Cedar Sawmills In B.C.	B.C. Research - J. Leach	d) Identify the primary sources of respirable and inhalable particle
1.9.10.0		LIAISON WITH INDUSTRIAL HEALTH AGENCIES	Vancouver	B.C. Research - J. Leach	Ensure current awareness of development in occupational health in areas of concern to forest products indust
1.9.10.0		HAZARDOUS CHEMICAL REVIEWS: WOOD DUST, CAPTAN, ASBESTOS, WELDING FUMES	Vancouver	B.C. Research - J. Leach	To prepare review papers which exami and summarize information in the chemical and medical literature
1.9.10.0		OILS, LUBRICANTS, GREASES AND OTHER PETROLEUM-BASED PRODUCTS IN THE WOOD PRODUCTS MANUFACTURING SECTOR	Vancouver	B.C. Research - J. Leach	Summarize information on the health hazards and safe handling practices for various categories
1.9.10.0		MATERIALS HANDLING MANUAL	Vancouver	B.C. Research - J. Leach	Supplements, corrections & updates to sheets in the Materials Handling Manual will be prepared, as necessar
1.9.10.0		CHLOROPHENATES	Wood preserving operations in B.C.	B.C. Research - J. Leach	a) Review the implementation of F.I.I.H.R. recommendations on handling chlorophenates

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.9.10.0		CHLOROPHENATES	Wood preserving operations in B.C.	B.C. Research - J. Leach	b) Review available information on potential hazards to health of candidate replacement anti-sapstain
1.9.10.0		CHLOROPHENATES	Wood preserving operations in B.C.	B.C. Research - J. Leach	c) Conduct industrial hygiene surveys of pentachlorophenol use and handling at wood preserving oper.
1.9.10.0		RESPIRATORY PROTECTION	Pulp & Paper Mills in B.C.	B.C. Research - J. Leach	Review respiratory protection programs in the pulp and paper industry in B.C. and recommend an effective programme
1.9.10.0		LONG-TERM HEALTH EFFECTS OF KRAFT MILL GASES	Kraft Mills in B.C.	B.C. Research - J. Leach	Summarise info. on the long-term effects of chlorine, chlorine dioxide TRS gases & turpentine vapour
1.9.10.0		INDUSTRIAL HYGIENE STUDIES AT PLYWOOD PLANTS	Plywood Plants in B.C.	B.C. Research - J. Leach	a) Carry out surveys of sources and concentrations of formaldehyde emissions in plywood operations
1.9.10.0		INDUSTRIAL HYGIENE STUDIES AT PLYWOOD PLANTS	Plywood Plants in B.C.	B.C. Research - J. Leach	b) Carry out surveys of application methods for plywood patching compounds, and patching gun maint.
1.9.10.0		INDUSTRIAL HYGIENE STUDIES AT PLYWOOD PLANTS	Plywood Plants in B.C.	B.C. Research - J. Leach	c) Identify the best available methods for controlling veneer dryer emissions to work areas at plants
1.9.10.0		MOULDS IN THE WORKPLACE ATMOSPHERE AT SAWMILLS	Sawmills in B.C.	B.C. Research - J. Leach	Detect, identify and count moulds in sawmills to determine if they are a potential risk to health
1.10.0.0		LATE QUATERNARY VEGETATION AND ENVIRONMENTAL CHANGES IN B.C.	SFU	Simon Fraser University - R.W. Mathewes	To study the historical development of forests in B.C.
1.10.1.0		SOIL STABILITY ON THE QUEEN CHARLOTTE ISLANDS (E.P. 782) (See also 6.0.0.0)	Q.C.I.	Ministry of Forests Prince Rupert Res.Sec. - D. Wilford	To analyze a series of case studies and relate these to forest and watershed management

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.10.1.0		ECOLOGICAL INVESTIGATIONS OF WILDFIRES IN NORTHERN B.C. (E.P. 868)	Northern B.C.	Ministry of Forests Research Branch - Pojar Meidinger, Trowbridge	As in title
1.10.1.0		A BIOLOGICAL STUDY OF THE DRY SOUTH-CENTRAL REGION OF B.C. (E.P. 887)		Ministry of Forests Research Branch T.T. McIntosh	
1.10.1.0		AN ECOSYSTEM APPROACH TO SILVICULTURAL MANAGEMENT OF IMMATURE FORESTS (E.P. 930) INCLUDES 4 STUDIES	Sayward Forest	Ministry of Forests Research Branch- Klinka, Green, Nyberg	To demonstrate a stand mapping metho which is designed for intensive forest planning
1.10.1.0		SOIL MOISTURE AND TEMPERATURE INVESTIGATIONS IN THE KAMLOOPS FOREST REGION (E.P. 943)	Kamloops	Ministry of Forests Research Branch - R.D. Winkler	As in title
1.10.1.0		INVESTIGATIONS OF ATMOSPHERIC AND SOIL CLIMATE IN THE DOME CREEK-McBRIDE-VALEMOUNT AREA OF THE ROCKY MOUNTAIN TRENCH (E.P. 947)	Dome Creek, McBride, Valemount	Ministry of Forests Research Branch - Hope, Blashill, McLeod	As in title
1.10.1.0		EFFECTS OF HARVESTING AND SITE PREPARATION PRACTICES ON FOREST RESOURCES AND VALUES (PC-25)	Southern Interior Vancouver Island	Can. Forestry Service: PFRC - R.B. Smith	To measure and elucidate the effects of harvesting and site preparation o forest resources and values
1.10.1.0		IMPROVED USE OF METEOROLOGY IN FORESTRY (PC-46)	Victoria	Can. Forestry Service: PFRC - R.H. Silversides	To develop meteorological under-standing and apply this knowledge to forestry management problems
1.10.1.0		POTENTIAL VALUE AND MANAGEMENT OF BLUE-GREEN ALGAE IN FORESTRY: LITERATURE SURVEY	Central Vancouver Island	MacMillan Bloedel - P.C. Simonsen	As in title
1.10.1.0	Dr	EFFECTS OF NITROGEN FIXATION ON LITTERFALL, SOIL ORGANIC MATTER ACCUMULATIONS, LITTER DECOMPOSITION AND ACCUMULATION OF NITROGEN	South central Vancouver Island	MacMillan Bloedel - D.E. Binkley	To quantify ecosystem biomass and nutrient pools in relation to the alder species
1.10.1.0		ECOLOGICAL ALLOCATION OF SPECIES FOR YIELD OPTIMIZATION(all M&B Management Units except TFL 39, Blks. 6 & 7)		MacMillan Bloedel - R.C. Bower	To determine the ecological variable which favor the yield of western hemlock over that of D.-fir

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1.10.1.0		QUEEN CHARLOTTE ISLANDS STUDY	Queen Charlotte Islands	FERIC - M. Nagy E.A. Sauder	A study of ways to reduce the environmental impact of logging (See also 1.7.0.0)
1.10.1.0		EFFECTS OF SLASHBURNING ON NUTRIENT LOSSES TO THE ATMOSPHERE	UBC Research Forest, Haney	UBC - Forestry - M.C. Feller	See entry under 1.3.1.2
1.10.1.0		DEVELOPMENT OF FOUR VERSIONS OF FORCYTE	Vancouver	UBC - Forestry - J.P. Kimmins	To produce an ecologically-sound forest management simulator for a range of conditions and practices
1.10.1.0	Fd	EFFECT OF SITE QUALITY ON PRODUCTION AND TURNOVER OF FINE ROOT BIOMASS	Vancouver Island	UBC - Forestry - H.W. Hase	To examine seasonal fluctuations in fine root biomass at 6 Df sites
1.10.1.0		INFLUENCE OF ABIOTIC AND BIOTIC SOIL FACTORS ON FINE ROOT BIOMASS PRODUCTION	Vancouver Island	UBC - Forestry - H.W. Hase	As in title
1.10.1.0		DETERMINATION OF THE HYDROLOGIC BASIS FOR SLOPE AND CHANNEL STABILITY IN ALPINE ENVIRONMENTS	UBC	UBC - Geography - O. Slaymaker M. Church	As in Title
1.10.2.0		MACMILLAN PARK STUDY (E.P. 749)		Ministry of Forests Research Branch - K. Klinka	Report & Map
1.10.2.0		AN ECOSYSTEM EVALUATION OF SUBALPINE FORESTS WITH THE EMPHASIS ON TRANSITIONAL AREAS BETWEEN THE MH AND ESFB IN BIOGEOCLIMATIC ZONES (E.P. 793)	Coast/Interior Transition	Ministry of Forests Research Branch - K. Klinka	As in title
1.10.2.0	Ss, H, Cw	SPECIES TRIAL (E.P. 814) TFL24 (SITKA SPRUCE, WESTERN HEMLOCK, WESTERN RED CEDAR)	TFL24, Sewell Inlet, Lyell Island	Western Forest Products - J. Barker	To determine best species for planting on a site-specific basis and effects of deer browsing on growth
1.10.2.0		ECOSYSTEM CLASSIFICATION PROGRAM FOR MINISTRY OF FORESTS (E.P. 822)		Ministry of Forests Research Branch - Lousier, Meidinger	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.10.2.0		WETLAND CLASSIFICATION CARIBOO CHILCOTIN (E.P. 883)	Cariboo/Chilcotin	Ministry of Forests/UBC Research Branch - C.E. Jones	To conduct an intensive examination of soil x vegetation relationships
1.10.2.0		A BIOLOGICAL STUDY OF THE DRY SOUTH CENTRAL REGION OF B.C. (E.P. 887)	Southern Interior B.C.	Ministry of Forests Research Branch - T.T. McIntosh	To collect and identify Bryophytes and relate their occurrence to habitat factors
1.10.2.0		ECOLOGICAL DESCRIPTION AND CLASSIFICATION OF GRASSLANDS (E.P. 888)	Southern Interior B.C.	Ministry of Forests Range Branch T. Lester	To describe and classify grasslands for management
1.10.2.0		INVESTIGATIONS OF SOIL TEMPERATURE IN ECOSYSTEMS OF THE PRINCE RUPERT FOREST REGION (E.P. 920)	Prince Rupert Region	Ministry of Forests Prince Rupert Res. Sec. - Trowbridge, McKeown	To develop a climatic characterization of the biogeoclimatic zones and relate soil temperatures
1.10.2.0		A PROBLEM ANALYSIS OF GRASSLAND CLASSIFICATION (E.P. 931)	B.C.	Ministry of Forests Research Branch - A. Nicolson	To make recommendations for placing the grasslands of B.C. into MOF Ecosystem Classification
1.10.2.0		CLASSIFICATION AND MANAGEMENT OF CHILCOTIN WET MEADOWS (E.P. 882)	Cariboo/Chilcotin	Ministry of Forests/UBC Research Branch - A.C. Mayall	To develop an objective classification for wet meadows
1.10.2.0		ECOSYSTEM ASSOCIATION MAPPING IN THE TRUAX BASIN OF THE KAMLOOPS FOREST REGION (E.P. 942)	Kamloops Region	Ministry of Forests Research Branch - Mitchell, Winkler	As in title
1.10.2.0		LAND CLASSIFICATION IN THE UPPER FLATHEAD RIVER DRAINAGE BASIN BY VISUAL ANALYSIS OF LANDSAT SATELLITE DATA	Can. portion of the Flathead River Drainage Basin	B.C. Research - G.F. Tomlins	Provision of a land/use cover map by visual analysis of LANDSAT colour imagery
1.10.2.0		THE SIMULATION OF LANDSAT-2 AND AN ASSESSMENT OF ITS CAPABILITIES FOR THE INVENTORY AND ASSESSMENT OF WETLANDS FOR MANAGEMENT PURPOSES	Cariboo-Chilcotin wetlands s.w. of Williams Lake	B.C. Research - G.F. Tomlins	An evaluate the potential of LANDSAT-Thematic Mapper data for ecological classification, inventory & manage.
1.10.2.0		IDENTIFICATION OF ECOSYSTEM ASSOCIATIONS IN THE NIMPKISH VALLEY (37-003) (Sec. 88 HV 99035)	Nimpkish	Canadian Forest Products - D.E. Rickson	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.10.2.0		FOREST CLASSIFICATION	Vancouver Island	Pacific Forest Products - V.J. Korelus	To develop and computerize a new forest inventory system for intensive management
1.10.2.0		ECOSYSTEM MAPPING Sec. (6-001)	TFL 6	Western Forest Products - J. Barker	As in title
2.1.0.0	Fd, Pl	DEER-CATTLE INTERRELATIONSHIPS	Kamloops	Agriculture Canada - D. Quinton	To evaluate competition between mule deer and cattle on grassland and forested rangeland in interior B.C.
2.2.0.0		MANAGEMENT OF B.C. RANGES FOR OPTIMUM BEEF PRODUCTION AND RESOURCE UTILIZATION	Kamloops	Agriculture Canada - D. Quinton	To optimize range management practices that maintain the range resource and maximize beef productivity
2.2.1.0		MANAGEMENT OF GRASSES AND LEGUMES FOR THE PRODUCTION OF FORAGE	Prince George	Agriculture Canada - J. Broersma	To identify locally-produced feeds for economical beef production
2.2.2.0		EVALUATION OF FORAGE CULTIVARS FOR HAY AND PASTURE	Prince George	Agriculture Canada - W. Pringle	To identify high yielding, quality forage crop species and cultivars
2.2.2.1		REVEGETATION OF RANGELANDS IN SOUTHERN INTERIOR B.C.	Kamloops	Agriculture Canada - A. McLean	To develop rangeland rehabilitation practices to increase beef cattle yields
2.2.4.0		BLOAT INCIDENCE OF ALFALFA AND SELECTED GENOTYPES	Kamloops	Agriculture Canada - W. Majak	To conduct bloat incidence and forage screening trials to evaluate bloat potential of some alfalfa genotypes
2.2.4.0		TIMBER MILK VETCH POISONING	Kamloops	Agriculture Canada - W. Majak	To develop guidelines to prevent TMV poisoning and to elucidate miserotoxin metabolism in cattle
2.2.4.0		QUALITY AND ANTIQUALITY CONSTITUENTS OF FORAGE	Kamloops	Agriculture Canada - W. Majak	To identify and quantify quality components and toxins in forages and to evaluate their effects on livestock

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
2.2.5.0		FERTILIZER REQUIREMENTS FOR RUMINANT FEED PRODUCTION	Kamloops	Agriculture Canada - A. van Ryswyk	To determine soil nutrient needs for optimal forage production on native rangelands, grasses and corn
2.2.5.0		RANGE PLANT ESTABLISHMENT, GROWTH AND SURVIVAL	Kamloops	Agriculture Canada - D. Stout	To recommend varieties and treatment to achieve a 10% increase in energy yield of forages in interior B.C.
2.2.5.0		PHYSIOLOGY AND MANAGEMENT RELATED TO WINTER SURVIVAL OF GRASSES AND LEGUMES	Kamloops	Agriculture Canada - D. Stout	To recommend management practices which will enhance winter survival o grasses and legumes
2.4.0.0		COMPATIBILITY OF TREE AND GRASS SEEDING IN THE KAMLOOPS FOREST REGION (E.P. 590)	Kamloops Region	Ministry of Forests Research Branch - M. B. Clark	As in title
2.4.0.0	PI	DETERMINATION OF THE QUALITY OF MINERAL SOIL EXPOSURE FOR SATISFACTORY ESTABLISHMENT OF DOMESTIC GRASSES ON CLEARCUTS (E.P. 945)	Kamloops Forest Region	Ministry of Forests Kamloops Res. Sec. - M.B. Clark	As in title. Not yet implemented
2.5.0.0		AN EXPLORATORY RANGE FERTILIZATION TRIAL (E.P. 861) INCLUDES 5 STUDIES	Kamloops	Ministry of Forests Research Branch (Wikeem)	To determine whether clipping of plots has a compounding effect on future yields
2.6.0.0		TECHNIQUES FOR DETERMINING SHRUB BIOMASS FROM AUXILIARY PLANT VARIABLES AND EVALUATION OF METHODS FOR APPLICATION IN RANGE INVENTORY (E.P. 949)		Ministry of Forests Research Branch	As in title
2.6.0.0		EVALUATION OF QUANTITATIVE SAMPLING METHODS FOR DETERMINING THE IMPORTANCE OF CRYPTOGRAMS (E.P. 955)		Ministry of Forests Research Branch - T. McIntosh	To determine indicators of range sit potential and condition of B.C. grasslands
2.6.0.0		RANGE GRASSES OF B.C.	Vancouver	BCIT Forest Res. - (Sivak)/Sci. Council of B.C.	To prepare an illustrated reference manual of common range grasses
3.0.0.0		AN ADAPTIVE SYSTEMS APPROACH FOR THE RESEARCH PROGRAM ON INTEGRATED WILDLIFE-INTENSIVE FORESTRY ON VANCOUVER ISLAND (E.P. 915)	Vancouver Island	Ministry of Forests Research Branch - D. Eastman	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
3.1.0.0		ANALYSIS OF POPULATION DYNAMICS OF BEARS	UBC	UBC - Forestry - F.L. Bunnell	To continue development and evaluation of analytical techniques (co-op project)
3.1.2.0		REPRODUCTIVE ECOLOGY OF GYRFALCONS	UBC	UBC - Forestry - F.L. Bunnell	To document reproduction behaviour of gyrfalcons as prey abundance fluctuates
3.1.3.0	Df	ANIMAL DAMAGE RESEARCH-IMPACT OF DEER BROWSING ON YOUNG FIR PLANTATIONS AND TO ASSESS VARIOUS METHODS OF REDUCING SUCH DAMAGE Sec. 88 HV 99020	TFL-2 Johnstone St.	CZ - Coast Wood Div. Project 2-017 - F.T. Leslie	As in title (See also 1.4.5.1)
3.1.3.0		FIELD EXCLOSURES	Ramsey Island	Western Forest Products - J. Barker	By use of an exclosure prevent further animal damage to a natural stand
3.1.3.0		WINTER HABITAT REQUIREMENTS OF WOODLAND CARIBOO	Blue River	UBC - Animal Science - E. Antifeau, D. Shackleton	To study habitat use in relation to snowfall and accumulation, food availability and forestry practices
3.1.3.0		COMPARATIVE DIGESTIVE EFFICIENCIES OF DOMESTIC GOATS, DOMESTIC SHEEP AND BLACK-TAILED DEER FOR Gaultheria shallon AND Alnus rubra	UBC	UBC - Animal Science - P. Frinton, D. Shackleton	To determine the relative abilities to utilize these native browse species
3.1.3.0		HABITAT AND DIET OVERLAP BETWEEN FERAL HORSES AND RANGE CATTLE ON THE SAME GRAZING AREA	Chilcotin	UBC - Animal Science - S. Preston D. Shackleton	To ascertain the degree of overlap in both habitat and plants eaten by feral horses & range cattle
3.1.3.0		FORAGING THEORY FOR RUMINANTS	?	UBC - Forestry - F.L. Bunnell	To explain and predict foraging behaviour of grazing and browsing ruminants
3.1.3.0		RANGE QUALITY, FORAGING BEHAVIOUR AND POPULATION QUALITY IN STONE SHEEP	n-c B.C.	UBC - Forestry - F.L. Bunnell	See entry under 3.2.3.0
3.1.3.0		SEASONAL MOVEMENTS AND HABITAT USE BY VANCOUVER ISLAND ROOSEVELT ELK	Vancouver Island	UBC - Forestry/ Min. of Environment - F.L. Bunnell/D. Janz	Not specified

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
3.1.4.0		VANCOUVER ISLAND WOLF ECOLOGY AND PREDATOR-PREY RELATIONSHIPS (E.P. 937)	Vancouver Island	Ministry of Forests/ Min. of Environment - I. Hatter (IWIFR)	As in title, with special attention to silviculture and harvesting
3.2.0.0	Fd	HABITAT RELATIONSHIPS OF MULE DEER IN THE INTERIOR DOUGLAS-FIR ZONE OF CENTRAL B.C. (E.P. 903)	Cariboo Forest Region	Ministry of Forests Research Branch - H. Armleder	To determine mule deer habitat use and winter range requirements
3.2.0.0		ROOSEVELT ELK IN SECOND-GROWTH FOREST (E.P. 912)	Sayward Forest	Ministry of Forests/ Min. of Environment - D. Janz	To assess the response of elk to the various silvicultural practices making up intensive forest mgmt.
3.2.0.0		CARIBOU-FORESTRY INTERACTIONS IN B.C. (E.P. 939)		Ministry of Forests Research Branch - Stevenson, Hatler	As in title
3.2.0.0		EVALUATING RANGE IMPROVEMENTS FOR BIGHORN SHEEP	Ashnola	UBC - Animal Science - D. Shackleton	As in title
3.2.0.0		NUTRITIONAL CONSTRAINTS ON DEER POPULATIONS	UBC	UBC - Forestry - F.L. Bunnell	To determine when specific range management practices may yield positive results with clear populations
3.2.1.0		LANDSAT IMAGE CLASSIFICATION AS A WILDLIFE HABITAT CLASSIFICATION SYSTEM (E.P. 913)		Ministry of Forests Research Branch - K. Sadoway	As in title
3.2.1.0		AN EVALUATION OF SAMPLING AND ANALYSIS SYSTEMS FOR WILDLIFE HABITAT ANALYSIS (E.P. 950)		Ministry of Forests Research Branch - R. Page	As in title
3.2.2.0		ROLE OF FIRE AS A HABITAT MANAGEMENT TOOL	Kamloops	Ministry of Forests - Range Branch (Jensen)	Not specified
3.2.2.0		ECOLOGY OF ELK IN THE BOREAL FOREST, WITH PARTICULAR REFERENCE TO FIRE	Tuchodi R.	U. Idaho (Min. of Environment) - R. Peck	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
3.2.3.0		DEVELOPING A WILDLIFE-HABITAT MANAGEMENT SYSTEM (MANATAT) (E.P. 914)		Ministry of Forests Research Branch - R. Page	As in title
3.2.3.0		EFFECTS OF INTENSIVE FORESTRY ON BLACK-TAIL DEER AND THEIR HABITAT (E.P. 923)	Vancouver Island	Ministry of Forests/ Min. of Environment - R. Davies (IWIFR)	As in title
3.2.3.0		EFFECTS OF INTENSIVE FORESTRY ON HABITAT OF VANCOUVER ISLAND DEER AND ELK (E.P. 934)	Vancouver Island	Ministry of Forests/ Min. of Environment - J. Nyberg (IWIFR)	
3.2.3.0		IMPACTS OF FOREST HARVESTING ON HABITAT SELECTION BY COASTAL GRIZZLY BEARS (E.P. 952)	Kimsquit R.	Ministry of Forests/ Min. of Environment - R. Archibald	As in title
3.2.3.0		IMPACTS OF LOGGING ON MOOSE MIGRATION AND HABITAT SELECTION IN NORTH-CENTRAL B.C.	Prince George	Fish & Wildlife Branch - F. Schwab	To determine seasonal changes in forage selection, assess changes in plant succession and forage quality
3.2.3.0		SECOND GROWTH DEER WINTER RANGE STUDY (616-17) (Sec. 88 MV 99007)	Vancouver Island	MacMillan Bloedel	To determine over-wintering success of deer in older second-growth stands in severe winters
3.2.3.0		THE ECOLOGY AND PROPAGATION OF Ceanothus sanguineus and C. velutinus in southern B.C.	Okanagan	J. Myles (Kelowna) - 765-5509)	As in title
3.2.3.0		INFLUENCE OF RESOURCE EXTRACTION DEVELOPMENTS ON THE ECOLOGY OF GRIZZLY	S.C. B.C., Flathead Valley, Montana	UBC- Animal Science - B. McLellan, D. Shackleton	To study social organization and ecology of grizzly bears with reference to forestry and mining
3.2.3.0		HABITAT RELATIONSHIPS AND POPULATION DYNAMICS OF COASTAL GRIZZLY BEARS	Vancouver Island	UBC - Forestry - F.L. Bunnell	To evaluate potential relationships between forestry practices and grizzly bears in coastal B.C.
3.2.3.0		RANGE QUALITY, FORAGING BEHAVIOUR AND POPULATION QUALITY IN STONE SHEEP	n-c B.C.	UBC - Forestry - F.L. Bunnell	To document effects of prescribed burning and fertilizing on alpine ranges and stands sheep population

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
3.2.3.0		ENERGETICS OF DEER MOVEMENT THROUGH SNOW	?	UBC - Forestry - C. Shank	Not specified
3.2.3.0		REPLACEMENT OF WINTER-RANGE BY PLANTATION MANAGEMENT	?	UBC - Forestry - F.L. Bunnell	To document the kinds of stand structure which creates winter range for black-tailed deer in managed sta
3.2.3.0		QUANTITATIVE RELATIONSHIPS BETWEEN FOREST CANOPY, SNOW CHARACTERISTICS AND HABITAT	?	UBC - Forestry - F.L. Bunnell	To extract relationships from existi data for development of a simulation model
3.2.3.0		SEASONAL MOVEMENTS AND HABITAT USE BY VANCOUVER ISLAND ROOSEVELT ELK	?	UBC - Forestry/ Min. of Environment - F.L. Bunnell, D. Janz	Not specified
4.1.2.0		RECOVERY TO PRODUCTION STATUS OF OYSTER BEDS NEAR LOG BOOM AREAS	Victoria	Seakem Oceanography Ltd. - (Popham)/Sci. Council of B.C.	To relate health of oysters to the proximity of log booms
4.2.0.0		FISH/FORESTRY INTERACTION PROGRAM	Queen Charlotte Islands	Fisheries & Oceans - G. Hartman	To determine how forest harvesting affects fish habitat and to ameliora ill effects
4.2.0.0		a) SYNOPTIC SURVEY AND REHABILITATION OF STREAMS	Queen Charlotte Islands	Poulin & Associates, - Vancouver	Addressing the effect of logging on unstable slopes
4.2.0.0		b) SYNOPTIC SURVEY AND REHABILITATION OF FOREST SITES	Queen Charlotte Islands	Poulin & Associates, - Vancouver	Addressing the effect of logging on unstable slopes
4.2.0.0		c) SILVICULTURAL SYSTEMS (see also 1.6.0.0)	Queen Charlotte Islands	Poulin & Associates, - Vancouver	Addressing the effect of logging on unstable slopes
4.2.0.0		d) ALTERNATE YARDING SYSTEMS	Queen Charlotte Islands	Poulin & Associates, - Vancouver	Addressing the effect of logging on unstable slopes

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
4.2.0.0		a) FISH/FORESTRY INTERACTION PROGRAM	Queen Charlotte Islands	Min. Forests/Environment - V.A. Poulin	To determine how forest harvesting affects fish habitat and to ameliorate ill effects
4.2.1.0		LOGGING ROADS AND WATER QUALITY	Kootenay Lake Slocan Valley	UBC - Forestry - D.L. Golding	To determine required minimum distances between logging activity and water supply intake
4.2.2.0		HYDROLOGIC RATE OF CUT ANALYSIS (22-006) (Sec. 88 HV 99045)	Vancouver	B.C. Forest Products - J.V. Toovey	To develop a method for analyzing impacts of timber renewal and regeneration on water yield, esp. peak flows
4.2.2.0		NUTRIENT DYNAMICS OF SMALL FORESTED STREAMS	Vancouver	UBC - Forestry - M.C. Feller	To assess the influence of inflow water and streambed sediment on the chemical composition of small streams
4.2.2.0		SNOW ACCUMULATION AND MELT IN FOREST OPENINGS (see also 1.6.1.3)	Marmot Creek Alberta	UBC - Forestry - D.L. Golding	To relate snow melt and run-off to size of clearing
4.2.2.0		EFFECT OF LOGGING ON WATER QUALITY AND YIELD (see also 1.6.1.3)	Jameson Creek	UBC - Forestry - D.L. Golding	To develop guidelines to protect coastal watersheds from ill-effects of logging
4.2.2.0		RATE OF SNOWMELT DURING RAINFALL	Vancouver	JBC - Forestry - D.L. Golding	a) To compare melt rates from snow during rainfall in clearcut and undisturbed forest
4.2.2.0		RATE OF SNOWMELT DURING RAINFALL	Vancouver	UBC - Forestry - D.L. Golding	b) To develop appropriate ameliorative guidelines
4.2.2.0		LOGGING IN THE GRAYSTOKES AREA	Okanagan	UBC - Forestry - D.L. Golding	From field examinations develop recommendations to maintain water quality and yield
5.0.0.0		RECREATION DEMAND STUDY	?	Ministry of Forests - Rec. Mgmt. Branch	To secure data on user numbers and preferences

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
5.0.0.0		RECREATION USERS PREFERENCE	?	Ministry of Forests - Rec. Mgmt. Branch (Apt)	To obtain reliable data on user numbers and preferences in recreatio areas
6.0.0.0		REHABILITATION OF LANDINGS AND SKID TRAILS (E.P. 777)	Cariboo/Chilcotin	Ministry of Forests Cariboo Res. Sec. - A. Vyse	Development and application of techniques to rehabilitate landings and trails
6.0.0.0		DEVELOPMENT OF REFORESTATION METHODS FOR AVALANCHE CONTROL (E.P. 781)	Manning & Stagleap Provincial Parks	Ministries of Forests & Highways (F.T. Pendl & C.F. Thompson)	To test tree planting in avalanche start zones and reforestation plan
6.0.0.0		HYDROSEEDING LOGGING ROADS FOR STABILIZATION AND RESOURCE PROTECTION (E.P. 818)	All Regions	Ministry of Forests Research Branch - S.G.H. Homoky	To find effective ways to control accelerated erosion following harvesting disturbance
6.0.0.0		DEVELOPMENT OF VEGETATION ESTABLISHMENT METHODOLOGIES FOR USE IN SURFACE EROSION CONTROL AND SITE REHABILITATION (E.P. 834) INCLUDES 9 STUDIES		Ministry of Forests Research Branch - W. W. Carr	As in title
6.0.0.0		THE PROPAGATION AND ESTABLISHMENT OF TREE AND SHRUB SPECIES FOR EROSION CONTROL (E.P. 863)	All regions	Ministry of Forests Research Branch - C. Marchant	To evaluate deep rooting shrubs and trees for use on erodible or eroding sites
6.0.0.0		FERTILIZATION, SOIL EROSION CONTROL AND SITE REHABILITATION	Vancouver Island	Pacific Forest Products - L.D. Husteds	To establish research projects to preserve or enhance site and forest productivity
6.0.0.0		SYNOPTIC SURVEY & REHABILITATION OF FOREST SITES (see also 4.2.0.0)	Queen Charlotte Islands	Poulin & Associates, - Vancouver	Addressing the effect of logging on unstable sites
6.0.0.0		REHABILITATION OF LANDS DISTURBED BY FOREST OPERATIONS WITH EMPHASIS ON THE MANAGEMENT OF SOIL	?	UBC - Forestry - J.V. Thirgood	Not specified
7.0.0.0		ECONOMICALLY-RECOVERABLE WOOD AND MARGINAL WOOD COSTS	Vancouver	UBC - Forestry - D. Haley	To develop a method for estimating economically-recoverable timber stock

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
7.0.0.0		FACTOR PRODUCTIVITY IN THE LUMBER INDUSTRY	Vancouver	UBC - Forestry - D. Haley	To develop a model to relate lumber output & labour, capital and wood inputs in the lumber industry
7.0.0.0		ALLOCATION OF CAPITAL TO SILVICULTURE	Vancouver	UBC - Forestry - D. Haley	To develop a method for setting priorities for silviculture expenditures

APPENDIX 1

B.C. FOREST SERVICE SILVICULTURE BRANCH PROJECTS

The next 13 pages list the operational titles being conducted by the Silviculture Branch, Ministry of Forests, using its identification numbers.

Information on these trials can be obtained through the Branch Director.

APPENDIX 1A

SEED ORCHARDS

SX 81601 K	Evaluation of six weed control treatments in an Interior spruce seed orchard
SX 82601 Q	Nitrogen fertilization of Douglas-fir seed orchards
SX 82602 Q	Soil moisture monitoring in seed orchards (1982)
SX 82603 Q	Handboosting comparison trial in Douglas-fir seed orchards
SX 82604 Q	Root pruning (vibratory plow) trial
SX 82605 Q	Comparison test between Hardi Mistblower and hydraulic sprayer for insect control in coastal seed orchards
SX 82606 Q	Supplemental pollination of Douglas-fir
SX 82607 Q	Pollen bank extraction testing and drying schedules
SX 82609 Q	Quantification of orchard seed production efficiencies and absolute seed losses from the time of flowering through to seed germination
SX 82610 Q	Spruce gall aphid assessment

APPENDIX 1B

Silviculture

NURSERIES

RNX 7551	Wood bullet growth test
RNX 7552	Seed cover test
RNX 7554	Hormone-treated seed test
RNX 7555	Algifeed test
RNX 7556	Deep cavity test
RNX 7557	Ray leach cell growth test
RNX 7558	Photoperiod test
RNS 7651	Wood bullet growth test No. 2
RNX 7653	Seed cover test No. 2
RNX 7654	Douglas-fir cavity test
RNX 7655	Ray leach container production test
RNX 7658	Wood fibre growth media test
RNX 7660	Block cleaner test
RNX 7661	Osmocote top dress test
RNX 7662	Pentox test
RNX 7751	Hormone-treated seed in bullets for emergent seedlings
RNX 7752	Larch injury test at Harrop
RNX 7753	Pine growth test at Harrop
RNX 7754	Seed cover test
RNX 7755	Styroblock 4A growth test
RNX 7759	Block sterilization test
RNX 7760	Supplemental light monitoring
RNX 7761	Growth retardant production test
RNX 7762	Inter-cavity root growth prevention test

APPENDIX 1B

NURSERIES CONTINUED

RNX 7764	Western red cedar production monitor
RNX 7765	Growth Assessment of acid-treated water at Green Timbers Nursery
RNX 7766	Root pruning test
RNX 7768	Osmocote uniformity test
RNX 7769	Field growth with osmocote fertilizer
RNX 7770	Germination test of some seedlots from Green Timbers, Spring sowing 1977
RNX 7771	Hormone-sumagro plastic bullet test
RNS 7772	Bedhouse growth tests
RNX 7773	Sumagro test
RNX 7853	Block sanitation test
RNX 7854	Pallet sanitation test
RNX 7855	Styroblock 313 growth test
RNX 7856	Block cleaner test
RNX 7857	Osmocote top dress test
RNX 7858	Pentox test
SX 80200 Q	Reducing height growth of fast growing species
SX 80201 Q	Reducing height growth of fast growing species
SX 80202 Q	Improving soluble fertilizer schedule
SX 80203 A	Comparison of trace element sources
SX 80204 Q	Improving rooting of Interior Douglas-fir
SX 80205 Q	Peat moss seed cover
SX 80206 Q	Germination Sequence

APPENDIX 1B

Silviculture

NURSERIES CONTINUED

SX 80207 Q	Algenol soil amendment
SX 80208 Q	Hot water removal of seed pitch
SX 80290 Q	Treating seed for Sirrococcus with hot water
SX 80210 Q	Hydrogel yellow pine crop
SX 80211 Q	Hydrogel lodgepole pine crop
SX 80212 Q	The effects of shade on root growth of Western Hemlock and Interior Spruce
SX 80251 Q	Surrey germinator test
SX 80252 Q	Koksilah monitoring program
SX 80253 Q	Harrop Nursery assessment
SX 80254 Q	Western hemlock dormancy initiation trial using ethrel
SX 80256 Q	Soil density trial
SX 80257 Q	Thornhill Nursery assessment
SX 80265 Q	Marguerite Nursery assessment
SX 81201 Q	1-1 plug transplant trial
SX 81202 Q	Harrop Nursery assessment
SX 81203 Q	Thornhill Nursery assessment
SX 81204 Q	Rootstock growth assessment
SX 81205 Q	An evaluation of applying cupric carbonate to styroblock cavities
SX 81206 Q	Proprietary fertilizer trial
SX 81207 Q	Commercial soil media trial
SX 81208 Q	Comparing growth in PSB and PSL containers
SX 81209 Q	Tolerance of sensitive species to full light

APPENDIX 1B

NURSERIES CONTINUED — Silviculture

SX 81210 Q	Preventing premature bud set in spruce with nutrients
SX 81211 Q	Trial of Shaklee cleaner
SX 81212 Q	Chemical root pruning operational trial
SX 82201 Q	Rootstock production trial - using PSB 415 B and 615
SX 82202 Q	Assessment of PSB 415 B and PSB 615 to produce larger stock
SX 82203 Q	Pelleted seed trial using Cwr
SX 82204 Q	Root stock assessment of modified square pots
SX 82205 Q	Chemical root pruning operational trial - 1982
SX 82206 Q	Proprietary fertilizers
SX 82207 Q	Peat sources and growing media trial
SX 82208 Q	Micro-container transplants
SX 82209 Q	Lime amendment trial
SX 82210 Q	An osmocote-nutricote trial
SX 82211 Q	Fall sowing trial
SX 82212 Q	Fall sowing of yellow cedar
SX 83201 Q	Pelleted seed trial

APPENDIX 1C

Silviculture

SX TRIAL INDEX

PLANTING

RNBDCCT	Reforestation Board Co-operative container trial
E.P. 669-1	Stock type - planting date trial
E.P. 669-2	Container - mudpack trial
E.P. 669-3	Marsh site container trial
E.P. 669-4	Spring-summer mudpack trial
E.P. 741.02	Field performance of three mudpack types
RNX 7101	Stock type - extended planting season trial
RNX 7102	Stock moving trial - Coast to Interior
SX 72101 G	
RNX 7301	Species - stock type trial
RNX 7302	Western hemlock container and soil mix trial
RNX 7351	Pine Taproot Test
SX 73101 G	
SX 73102 G	
RNX 7401	Bullet-plug trial
RNX 7406	Wood bullet degradation trial
SX 74101 G	
RNX 7501	Yellow pine root pruning trial
RNX 7503	White spruce bareroot - mudpack trial
RNX 7504	Engelmann spruce: bareroot - mudpack trial
RNX 7505	Englemann spruce: bareroot - mudpack trial
RNX 7506	Wood bullet- fertilizer trial
RNX 7508	Container-transplant trial on brush sites

APPENDIX 1C

Silviculture

SX TRIAL INDEX

PLANTING CONTINUED

RNX 7517	Nisula - Noble fir trial
SX 75101 G	To study what effect different root pruning regimes have on survival, growth and stability of 2+1 lodgepole pine planting stock
SX 75102 G	To study the relationship between natural and planted lodgepole pine on mechanically prepared sites
SX 75103 G	
RNX 76-3	Wood bullet fertilizer trial
RNX 7611	Mudpack shipping trial
SX 76101 G	
SX 77101 G	
RNX 7801	Hi-cone container trial
RNX 7802	Review of silviculture branch stock trials established 1968-1976
SX 78101 G	Informal white spruce provenance trial
SX 78500 Q	Field performance trials with the Walters injection planter
RNX 7901	Lodgepole pine root form trial
RNX 7902	Hemlock dormancy trial
RNX 7951	The Spencer-Lemaire handling trial
SX 79101 G	Lodgepole pine rust resistance study
SX 79102 G	Survey of lodgepole pine diseases (uses E.P. 657.6)
SX 79103 G	Selection of white spruce planting stock for use on competition susceptible spruce/alpine fir sites
SX 79104 G	

APPENDIX 1C

Silviculture

SX TRIAL INDEX

PLANTING CONTINUED

SX 79105 Q	Field test of two types of planting gun (RNX 7905)
SX 79106 G	
SX 79107 G	
SX 8001 Q	Co-operative bullet-plug trial
SX 8002 Q	Hormone bullet trial
SX 8003 Q	Trial of Pleton grown mudpacks
SX 8004 Q	Western hemlock paperpot trial
SX 8005 Q	Co-operative structure soil trial
SX 80100 Q	Stock type development trial
SX 80101 Q	PAL-2 planting gun trial
SX 80101 R	Two-way Anova results for stock trial
SX 80102 R	Two-way Anova results for stock trial
SX 80103 Q	Operational trials with Timberland tree planter
SX 80103 R	Two-way Anova results for stock trial
SX 80104 Q	Operational trials with C&H tree planter
SX 80104 R	Two-way Anova results for stock trial
SX 80105 Q	Trends in survival and growth: A review of Silviculture Branch stock trials 1968-77
SX 80105 R	Two-way Anova results for stock trial
SX 80106 R	Two-way Anova results for stock trial
SX 80107 G	
SX 80108 G	Peaumt fertilizatin at time of planting
SX 81101 Q	Walters bullet planting (Burns Lake)
SX 81104 Q	Prince George brush site - plug transplant trial
SX 81105 Q	Structure soil trial
SX 81106 Q	Planting

SX TRIAL INDEX

PLANTING CONTINUED

SX 81107 G	Outplanting of lodgepole pine grafts, rust resistance study
SX 81108 G	Fertilization at planting of Interior spruce in the Prince George Region
SX 81109 G	
SX 82101 Q	Hydrogel trial
SX 82102 Q	Survival and growth of trees planted on machine prepared spots
SX 82103 Q	Western hemlock darkout dormancy trial
SX 82104 Q	Planting on machine prepared spots
SX 82105 Q	Outplanting of rust resistant white pine
SX 82106 N	Ferilizer treatment at the time of planting
SX 82107 V	Survival and initial growth of morphologically defined classes of Douglas-fir planting stock on high site lands subject to dense cover
SX 82108 G	A large planting stock trial
SX 82109 G	A plantation/grazing trial
SX 82110 N	The effect of apple storage facilities on the field performance of planting stock
SX 82111 N	Root egress from plugs planted on fine textured soils
SX 82112 G	

APPENDIX 1C

Silviculture

SX TRIAL INDEX

SITE PREPARATION

SX 79501 Q	The Cazes and Heppner plow scarifier
SX 80500 Q	Use of Glyphosate herbicide for site preparation of grassy cutovers
SX 80501 Q	Use of Glyphosate herbicide for site preparation of grassy cutovers
SX 80502 Q	Operational trials of a spot scarifier
SX 81501 Q	Site preparation of grassy sites using Glyphosate
SX 81502 Q	Trials with modified Beales plow
SX 81503 Q	Time study of Eden piling rake
SX 81504 Q	Design long tooth brush rake

APPENDIX 1D

Silviculture

STAND TENDING

E.P. 687	Wee-Do Glyphosate injection trial in lodgepole pine
SX 7801	Girdling tool trial
SX 78402	Examining 70 mm photography for stand tending (SX 7802)
SX 79401 G	Chemical conifer release studies
SX 79402 G	Lodgepole pine foliar sampling
SX 79403 G	Assessment of lodgepole pine ingress following juvenile spacing
SX 79600 Q	Operational trial of ground spray equipment for site preparation
SX 79601 Q	Blue River herbicide trial
SX 79602 Q	MSMA injection trial
SX 80400 Q	Glyphosate injection trial
SX 80401 N	Yahk Valley operational chemical spacing trial with M.S.M.A.
SX 80402 R	Girdling equipment
SX 80403 G	Pruning of juvenile lodgepole pine
Sx 80404 G	The study of herbicide use in brushing and weeding at Walker-Goodson Creek
SX 80405 G	A sanitation spacing experiment in a residual subalpine fir-spruce stand
SX 80406 Q	Juvenile spacing productivity studies in the Vancouver Forest Region (1980) and in the Interior (1981)
SX 81401 Q	MSMA Injection equipment trial
SX 81402 K	Clearwater fertilizing t rial
SX 81403 K	Asulox-Bracken fern trial
SX 81404 V	

STAND TENDING CONTINUED

SX 81405	V	
SX 81406	G	Assessment of old logged stands on the Alexa Lake Forest Reserve
SX 81407	G	Conifer release treatment using Velpar Grid "Ball" and manual brushing
SX 82401	C	Strip thinning in juvenile lodgepole pine
SX 82402	V	Corrective fertilization of Brittain River Douglas-fir plantation
SX 82403	V	Fertilization with nitrogen to improve growth of stagnant Sitka spruce near Nahwith Lake
SX 82404	V	Aerial application of Roundup 104-295
SX 82405	Q	Velpar Gridball trial
SX 82406	G	Larch fertilization trial
SX 82407	V	Pesticide permit 104-404
SX 82408	N	Live branch survival and performance in spaced lodgepole pine
SX 82409	C	Rate of spread of Mistletoe in spaced lodgepole pine

APPENDIX 1D

Silviculture

BRUSHING AND WEEDING

SX 82701 Q	Herbicide test trial for brushing and weeding on recently established plantation using the Ultra-low Volume sprayer
SX 82702 N	Field trial of chemical brushing and weeding
SX 82703 R	Operational trial of Roundup herbicide at the Paul fire
SX 82704 R	Operational trial of Roundup herbicide at Hell's Bells
SX 82705 R	Velpar herbicide trial at the Paul fire
SX 81505 Q	Re-design of spot scarifier
SX 81506 Q	Time study of F.M.C.
SX 81507 Q	Trials with Leno Scarifier
Sx 81508 Q	Brush control trial (Blue River)
SX 81509 Q	Brush control trial (Muskawa River)
SX 81510 Q	Grass control trial (Mile 105)
SX 81511 Q	Herbicide treatment at Red Rock seed orchard
SX 81512 Q	Marttinni plow scarification
SX 81513 Q	Leno scarifier high lead trial
SX 81514 G	Mechanical site treatment and stock selection for conversion of back-logged areas
SX 82501 G	Mechanical site treatment and stock selection for conversion of back-logged areas
SX 82502 G	Chemical and mechanical site treatment for conversion of brushy areas
SX 82503 Q	Trials with mounding scarifier
SX 82504 Q	Trials with bucket scarifier
SX 82505 Q	Site rehabilitation using a ball and chain
SX 82506 Q	Salal control trial
SX 82507 G	Site conversion in the Stewart Lake area - Dawson Creek
SX 82508 V	Ploughing as a method of site improvement in Northern Vancouver Island
SX 82509 G	Calamagrostis in plantations of the Upper Cache Creek area
SX 83501 Q	Trial of tiller-trencher

APPENDIX 2

ADDRESSES OF RESEARCH AGENCIES

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PART II

FIELD TESTS AND DATA COLLECTION INVESTIGATIONS IN THE PROVINCE OF B.C.

Prepared by

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March, 1983

B. DATA COLLECTION AND INVENTORY

1.0.0.0 SEED PRODUCTION AND GENETICS

2.0.0.0 NURSERY PRACTICES

3.0.0.0 SILVICULTURE AND TENDING

- 3.1.0.0 Afforestation/reforestation
- 3.2.0.0 Stand tending
- 3.3.0.0 Silvics
- 3.4.0.0 Protection
  - 3.4.1.0 insects and diseases
  - 3.4.2.0 fire

4.0.0.0 FOREST/STAND MANGEMENT

- 4.1.0.0 Intensive forestry
- 4.2.0.0 Timber supply
- 4.3.0.0 Economics and labour
- 4.4.0.0 Inventory, mensuration and yields
- 4.5.0.0 Stand modelling

5.0.0.0 ECOLOGICAL STUDIES AND ENVIRONMENT

- 5.1.0.0 Mapping classification, description
- 5.2.0.0 Integrated use
- 5.3.0.0 Hydrology
- 5.4.0.0 Meteorology

6.0.0.0 HARVESTING

7.0.0.0 PRODUCTS AND PROCESSING

- 7.1.0.0 Energy from biomass

8.0.0.0 LAND USE

- 8.1.0.0 Recreational land use

9.0.0.0 MISCELLANEOUS

- 9.1.0.0 Statistical methods, computer applications
- 9.2.0.0 Information systems, terminology

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.0.0.0		REPRODUCTIVE CYCLE OF B.C. CONIFER GENERA, BOOKLET SERIES (E.P. 941)		Ministry of Forests Research Branch - J.N. Owens	As in title
2.0.0.0		MARGUERITE GROWTH TEST (RNX 7965)	Marguerite	Ministry of Forests	Evaluate Marguerite nursery site
3.1.0.0		PLANTING GUN MODIFICATIONS	?	Ministry of Forests - Engineering Branch	To adapt the PAL-1 planting gun fo use with rigid containers
3.1.0.0		REGENERATION FAILURE ON SOUTH-FACING ASPECTS (316-1)	Vancouver Island	MacMillan Bloedel	As in title
3.1.0.0	Ss, H, Cw	SPECIES TRIAL	TFL24 Sewell Inlet, Lyell Island	Western Forest Products - J. Barker	Determine optimal choice of planti species and impact of deer browsin
3.1.0.0		COST EFFECTIVENESS OF ALTERNATIVE PLANTING OPTIONS (RNX 79106Q)		Ministry of Forests/ B.C. Research	Evaluate methods for comparing sta establishment techniques
3.1.0.0		POTENTIAL FOR MECHANIZED REFORESTATION IN BRITISH COLUMBIA (RNX 79107Q)		Ministry of Forests/ B.C. Research	Development of a system to rate land's suitability for mechanical reforestation
3.1.0.0	Fd	ASSESSMENT OF PLANTATION GROWTH RATES ON TFL#5	TFL#5	Ministry of Forests	To develop a regression analysis comparing actual with anticipated growth rates
3.1.0.0		TRIALS OF TIMBERLAND TREE PLANTER	Interior Plateau	Ministry of Forests Silviculture Branch	To test success of mechanical planting of bareroot seedlings int gray luvisols
3.2.0.0		HERBICIDE LANCE	?	Ministry of Forests Engineering & Silviculture Branches	To develop an efficient lance-type herbicide applicator

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
1.0.0.0		REPRODUCTIVE CYCLE OF B.C. CONIFER GENERA, BOOKLET SERIES (E.P. 941)		Ministry of Forests Research Branch - J.N. Owens	As in title
2.0.0.0		MARGUERITE GROWTH TEST (RNX 7965)	Marguerite	Ministry of Forests	Evaluate Marguerite nursery site
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3.2.0.0		HERBICIDE LANCE	?	Ministry of Forests Engineering & Silviculture Branches	To develop an efficient lance-type herbicide applicator

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
3.3.0.0	Sw	PLANTATION GROWTH PERFORMANCE ANALYSIS IN THE NORTHERN INTERIOR (E.P. 938)	Prince George Forest Region	Ministry of Forests Research Branch - D. Draper	To prepare provisional plantation performance standards and to identif sources of variation
3.3.0.0	Se, Sw	SEED YIELDS FOR SI CONES	Vernon	Ministry of Forests Silviculture Branch - P. Birzins	To develop a reliable 'short cut' method of estimating yield of filled seeds in cones
3.3.0.0		"SILVICS" OF B.C. TREE SPECIES		UBC - Forestry - J. Worrall, V.Krajina, K. Klinka	
3.4.0.0		DETECTION AND REPORTING: FOREST INSECT AND DISEASE SURVEY (PC-02 & 096)	B.C. & Yukon	Can. Forestry Service: PFRC - G.A. Van Sickle	As in title
3.4.0.0		DEVELOPMENT OF PEST MANAGEMENT SYSTEMS (PC-40)	Victoria	Can. Forestry Service: PFRC - W.J. Bloomberg	To develop computer system applications of four major insect and disease pests
3.4.0.0		DAMAGE APPRAISAL (PC-62) INCLUDES 4 STUDIES	B.C. & Yukon	Can. Forestry Service: PFRC - G.A. Van Sickle	To relate growth loss and mortality level and duration of infestation an to external symptoms
3.4.1.0		INSECT AND DISEASE PREVENTION AND CONTROL	Province-wide	Ministry of Forests Reg. Protection Branch - (De Boo)	Not specified
3.4.1.0		ROOT DISEASE ANALYSIS SURVEY (PM-V-RD1)	Quadra, Nootka TSA's	Ministry of Forests Reg. Protection Br. - (Wood)	To estimate timber losses to root diseases, to develop disease hazard indices & root disease mgmt.guidelir
3.4.1.0		ROOT DISEASE INCIDENCE AND INTENSITY v. STAND AGE (PM-I-RD3)	Campbell River	Ministry of Forests Reg. Protection Br. - (Wood)	To develop correlations between star age and root disease
3.4.1.0		EVALUATION OF PREVIOUS STUMP PULLING OPERATIONS FOR ROOT DISEASE CONTROL (PV-V-RD4)	Province-wide	Ministry of Forests Reg. Protection Br. - (Wood)	To collate existing trials' information & formulate recommendations : disease control by stump pulling

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
3.4.1.0	S	REGIONAL SPRUCE WEEVIL SURVEYS (PM-V-SW2) Sec. 88	Vancouver TSA's	Ministry of Forests Reg. Protection Br. - (Wood)	To relate observed damage to weevil populations and to assess impacts on timber production
3.4.1.0	S	SPRUCE WEEVIL SURVEY SYSTEM (PM-V-SW4)	Region	Ministry of Forests Reg. Protection Br. - (Wood)	To compare sequential, plot and strip sampling
3.4.1.0	Ss	SPRUCE WEEVIL OVIPOSITION AND EMERGENCE PERIODS IN COASTAL SITKA SPRUCE STANDS IN THE VANCOUVER REGION (PM-V-SW5)		Ministry of Forests Reg. Protection Br. - (Wood)	To investigate anomalies in weevil behaviour and to modify clipping control accordingly
3.4.1.0		MERCHANTABLE DAMAGE ASSESSMENT IN BUDWORM INFESTED STANDS (PM-V-WSB1)	Vancouver Region	Ministry of Forests Reg. Protection Branch	To develop a survey system to assess budworm damage and guidelines to priorize stands for salvage logging
3.4.1.0		DETECTION AND APPRAISAL OF FOREST PESTS AND TREE DAMAGE (PC-02)	B.C. & Yukon	Can. Forestry Service: PFRC - G.A. Van Sickle	Produce annual survey, conduct quarantine activities, maintain records and describe implications of pest activity
3.4.1.0		DAMAGE APPRAISAL (PC-62)	Victoria & southern B.C.	Can. Forestry Service: PFRC - G.A. Van Sickle	To relate volume losses to pest infestations
3.4.1.0		AN ASSESSMENT OF Fomes annosus IN THE QUEEN CHARLOTTE ISLANDS	QCI	?	Not specified
3.4.2.0		LIGHTNING LOCATION SYSTEM TEST	Lumby, Vandenby, Kamloops	Ministry of Forests Protection Branch	To test functioning of a lightning locater system in steep, hilly terrain
4.0.0.0		COMPARISON OF BASIC, PARTIAL INTENSIVE AND FULL INTENSIVE FORESTRY	Okanagan T.S.A.	Ministry of Forests Planning Branch - (Bullen)	To determine and compare benefits/cost ratios for 3 levels of management
4.0.0.0		LAND TYPE MAPPING FOR FOREST MANAGEMENT INTERPRETATIONS (E.P. 796)	Abbot Creek Watershed	Ministry of Forests - W.J. Watt	Production of map and report

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
4.1.0.0		SUITABILITY OF LAND FOR FULLY MECHANIZED FOREST OPERATIONS IN THE VANCOUVER FOREST DISTRICT	Vancouver Region	UBC - Forestry - J. Walters	Not specified
4.1.1.0		IMPACT OF SHORT ROTATIONS AND WHOLE TREE HARVESTING ON FOREST NUTRIENT BUDGETS (P-8)	U.B.C.	UBC - Forestry - J.P. Kimmins	To collate existing data
4.2.0.0		TIMBER SUPPLY MODELS		Ministry of Forests Planning Branch - (Errico)	To compare MUSYC and TREES timber supply models to extend present timber yield planning capability
4.2.0.0		DIESELFUEL CONSERVATION (12.1)		FERIC - D.G. Smith	To keep abreast of relevant diesel fuel saving developments
4.2.0.0		INVESTIGATION OF METHODS TO DETERMINE ECONOMIC WOOD SUPPLY AND MARGINAL WOOD COST ON A REGIONAL BASIS		UBC - Forestry/NSERC - D. Haley	
4.3.0.0		THE STRUCTURE OF FOREST POLICY IN CANADA - A DOCUMENTATION AND EVALUATION OF FOREST POLICY IN EACH OF THE CANADIAN PROVINCES		UBC - Forestry - P. Pearse	Also an analysis of major issues of public forest policies
4.3.0.0		FOREST INDUSTRY INDUSTRIAL HEALTH RESEARCH PROGRAM	Vancouver	COFI/FIR/B.C. Research	To identify practical guidelines for health protection in the forest industry
4.4.0.0		GROWTH AND YIELD STUDY IN MANAGED FOREST STANDS	Cranbrook	Ministry of Forests Inventory Branch	Inventory sampling design
4.4.0.0		VARIABLE DENSITY YIELD PREDICTION	Victoria	Ministry of Forests Inventory Branch - (Viszlai)	To develop valid standard growth models as a basis for evaluating responses to treatment
4.4.0.0		GROWTH AND YIELD STUDIES IN MANAGED AND NATURAL FOREST STANDS	Province-wide	Ministry of Forests Inventory Branch	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
4.4.0.0		IMPROVED SAMPLING METHODOLOGY: SAMPLING FOR TREE DENSITY AND SPATIAL PATTERNS (E.P. 924)	?	Ministry of Forsets - H. Stauffer	Not specified
4.4.0.0		RANGE INVENTORY FOR STATUS AND TREND	Interior - 5 regions	Ministry of Forests Range Management Branch - (Lester)	To develop appropriate methods for inventory of forested rangelands
4.4.0.0		YIELD STUDIES, QUEEN CHARLOTTE ISLANDS	Q.C.I.	Western Forest Products - J. Barker	To conduct a progressive yield stu in second-growth stands
4.4.0.0	Pl	DEVELOPMENT OF A DENSITY MANAGEMENT DIAGRAM FOR LODGEPOLE PINE (Sec. 88(2))	Southern Interior	Ministry of Forests/ Weyerhaueser Co. (Johnstone, Flewelling)	As in title
4.4.0.0		THEORY DEVELOPMENT FOR MULTI-STAGE SAMPLING WITH PARTIAL REPLACEMENT		UBC - Forestry - D.D. Munro	
4.4.0.0		TREE-RING ANALYSES TO IMPROVE YIELD OF NATURAL AND PLANTED STANDS		UBC - Forestry/NSERC - J.H.G. Smith	As in title
4.4.0.0		DEVELOPMENT OF A COMPREHENSIVE SYSTEM FOR MODELLING FOREST BIOMASS		UBC - Forestry - J.H.G. Smith	As in title
4.4.0.0		SUMMARY OF TIMBER INVENTORY DATA FROM THE UBC ENDOWMENT LANDS		UBC - Forestry - J.H.G. Smith	As in title
4.5.0.0	Df	DEVELOPMENT AND APPLICATION OF THE DOUGLAS-FIR GROWTH MODEL (TASS-Df) (E.P. 927)	?	Ministry of Forests Research Branch - K.J. Mitchell	As in title
4.5.0.0		MODIFICATION OF RICHARD CHAPMAN GROWTH MODEL	?	Ministry of Forests Inventory Branch - (Viszlai)	To expand yield-predicting capability

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
4.5.0.0		TESTING OF MUSYC AND TREES MODELS	Victoria	Ministry of Forests Planning Branch - (Errico)	Not specified
4.5.0.0	Df	GROWTH MODELLING OF DOUGLAS-FIR (22-008) (Sec. 88 HV 99048)	Vancouver	B.C. Forest Products	Using 24 plots of an old spacing tri to develop managed stand yield table
4.5.0.0		FIELD RESEARCH AND COMPUTER SIMULATION MODELLING OF THE LONG-TERM CONSEQUENCES OF INTENSIVE BIOMASS HARVESTING ON SOIL FERTILITY AND BIOMASS	U.B.C.	UBC - Forestry - J.P. Kimmins	As in title
4.5.0.0		PREPARATION OF A PROPOSAL TO DEVELOP A COMPREHENSIVE FOREST BIOMASS GROWTH MODEL (P-64)	U.B.C.	UBC - Forestry - J.H.G. Smith	An up-to-date evaluation of biomass modelling
5.0.0.0		FOREST LAND PRODUCTIVITY PACIFIC/YUKON REGION (PC-52)		Can. Forestry Service: PFRC - E.T. Oswald	To have field assessments and have prepared preliminary maps
5.0.0.0		EFFECTS OF HARVESTING AND SITE PREPARATION ON FOREST RESOURCES (PC-25) INCLUDES 2 STUDIES	Victoria	Can. Forestry Service: PFRC - R.B. Smith	To identify, elucidate and measure the effects of harvesting and site preparation on forest resources
5.0.0.0		CARNATION CREEK EXPERIMENTAL WATERSHED PROJECT (PC-56) INCLUDES 2 STUDIES	Carnation Creek	Can. Forestry Service: PFRC - R.B. Smith	To determine the effects of forest harvesting on water and fish production
5.0.0.0		PERSPECTIVE PLOT DEMONSTRATION PROJECT	Vancouver	UBC - Forestry - P.A. Miller	To demonstrate and evaluate the utility of the P.P.D.P. for assessin the impact of harvesting operations
5.0.0.0		SIMULATION GAMES AS COMMUNICATION TOOLS	Vancouver	UBC - Forestry - P.A. Miller	To provide empirical guidance on the usefulness of educational games to t learning process
5.0.0.0		PERCEPTUAL FACTORS AND LANDSCAPE ATTRIBUTES IN SCIENCE PREFERENCE	Vancouver	UBC - Forestry - P.A. Miller	To relate theoretical scenic quality ratings with visitor preferences

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
5.1.0.0		QUANTIFICATION OF SOIL NUTRIENT REGIME (E.P. 963)		Ministry of Forests Research Branch - G. Hope, A. McLeod	As in title
5.1.0.0		SOIL PLANT RELATIONSHIPS	Southern Interior	Agriculture Canada - A. McLean	a) To define evapotranspiration characteristics of crested wheatgrass on Dark Brown soils
5.1.0.0		SOIL PLANT RELATIONSHIPS	Southern Interior	Agriculture Canada - A. McLean	b) To prepare a manual outlining remote sensing mapping methods for rangeland vegetation
5.1.0.0		SOIL PLANT RELATIONSHIPS	Southern Interior	Agriculture Canada - A. McLean	c) To prepare a technological transfer on the distribution of wet lands in Interior B.C.
5.1.0.0		SOIL PLANT RELATIONSHIPS	Southern Interior	Agriculture Canada - A. McLean	d) To determine the relationships between forage growth and soil water regime & temperature on benchmark soil
5.1.0.0	Fd	CLASSIFICATION OF RANGE PLANT COMMUNITIES	Kamloops	Agriculture Canada - A. McLean	To develop an ecological classification for management in the Chilcotin and I.D.F. zone grasslands
5.1.0.0		CONTROL AND LIFE HISTORY OF DIFFUSE AND SPOTTED KNAPWEED	Kamloops	Agriculture Canada - A. McLean	To ascertain life histories of diffuse and spotted knapweeds and hence to develop control measures
5.1.0.0		SOIL-SITE STUDY (22-08-01) (Sec. 88 HV 99030)	TFL 22	B.C. Forest Products	Not specified
5.1.0.0		AN ECOSYSTEM EVALUATION OF FORESTS ON THE WEST COAST OF VANCOUVER ISLAND, ESPECIALLY THE CWH WET SUBZONE (Project 22-09-01) (Sec. 88, HV 99029)	West Coast Vancouver Island	B.C. Forest Products - A. Chatterton	As in title
5.1.0.0		ECOSYSTEM SURVEY OF BLOCK 17, FTL No. 2 (2-016)	TFL No. 2	C/Z Coast Wood Division - F.T. Leslie	To develop a decision aid in map form for planning harvesting and silvicultural procedures

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
5.1.0.0		LANDSLIDE INVENTORY (616-3) (Sec. 88, HV 99001)	TFL 21	MacMillan Bloedel	As in title
5.1.0.0		LANDSLIDE INVENTORY (616-12) (Sec. 88, HV 99002)	TFL 20,21	MacMillan Bloedel	As in title
5.1.0.0		BIOGEOCLIMATIC ZONES	Vancouver Island, Mainland, Q.C.I.'s (TFL 7, 20, 21, 39)	MacMillan Bloedel - R.C. Bower	As in title
5.1.0.0		ECOLOGICAL CLASSIFICATION OF FOREST LAND	Vancouver Island	Pacific Forest Products - V.J. Korelus	To classify and map fee simple lands from an ecological viewpoint for intensive silviculture
5.1.0.0		ECOSYSTEM MAPPING & CLASSIFICATION QCI, TFL 24	QCI, TFL 24	Western Forest Products - T. Lewis	As in title
5.1.0.0		BIOGEOCHEMICAL STUDIES IN COASTAL B.C. FORESTS TO PROVIDE DATA FOR THE FORCYTE SIMULATION MODEL		UBC - Forestry/NSERC - J.P. Kimmins	
5.1.0.0		CONTINUATION OF A STUDY ON INDICATOR PLANT SPECIES IN SOUTHWESTERN B.C.		UBC-Forestry/NAHS - K. Klinka	
5.1.0.0		VEGETATION OF THE LOWER FRASER VALLEY FLOODPLAIN, IMMEDIATELY PRIOR TO AGRICULTURAL SETTLEMENT.	Fraser Valley, Hope to Georgia Straight	UBC- Geography - Mrs. M. North	To establish the vegetative cover prior to dyking and draining
5.2.0.0		FISHERY-FORESTRY INTERACTIONS IN AREAS OF INTENSIVE MASS WASTING (E.P. 862)	Queen Charlotte Islands	Ministry of Forests/Min Environment/Fisheries & Oceans - V.A. Poulin	Report & recommendations (6 sub-projects
5.2.0.0		NORTH THOMPSON/RAFT RIVER CARIBOU HABITAT ASSESSMENT, LICHEN INVENTORY AND SELECTIVE LOGGING (E.P. 896)	North Thompson/ Raft River	Ministry of Forests/UBC - T. Antifeau K. Palmer	Assessment of Caribou habitat use

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
5.2.0.0		EFFECTS OF INTENSIVE FOREST MANAGEMENT ON NON-UNGULATE WILDLIFE (E.P. 916)	?	Ministry of Forests Research Branch - K. Sadoway	As in title
5.2.0.0		PROBLEM ANALYSIS: INTERACTIONS AMONG FORESTRY, RANGE AND WILDLIFE MANAGEMENT IN THE EAST KOOTENAYS (E.P. 936)	East Kootenays	Ministry of Forests Research Branch - M.D. Pitt	As in title
5.2.0.0		WILDLIFE HABITAT HANDBOOKS FOR THE FORESTS AND RANGELANDS OF B.C. AND ASSOCIATED PROJECTS (E.P. 951) INCLUDES 2 STUDIES	Victoria	Ministry of Forests Research Branch - R. Ellis	As in title
5.2.0.0		PREPARATION OF GUIDELINES FOR THE MANAGEMENT OF MULE DEER HABITAT IN THE INTERIOR OF B.C. FORESTS		Harold Armleder - 398-7121 (Wms. Lake)	Seasonal habitat use by deer and movements of deer as affected by timber harvesting are being studie
5.2.0.0		PROBLEM ANALYSIS OF PINE MARTEN/FORESTRY INTERACTIONS	Province-wide	Ministry of Forests/ Min. of Environment - L. Stodur	As in title
5.2.0.0		QUALITY AND DIETS OF CATTLE AND DEER	Kamloops	Agriculture Canada - D. Quinton	To determine the quality of range diets of deer and cattle
5.2.0.0		ENVIRONMENTAL IMPACT ASSESSMENT. (PC-43)	B.C. & Yukon	Can. Forestry Service: PFRC - W. Stanek	To assess and review - impact of major projects
5.2.0.0		ALTERNATE BROWSE STUDY - A LITERATURE REVIEW	Vancouver	B.C. Forest Products - J. Toovey	As in title
5.2.0.0		LEGUME-CONIFER-WILDLIFE INTERACTION STUDY (555-7) (Sec. 88, HV 99032)	Vancouver Island	MacMillan Bloedel - R.T. McLaughlin	To test if legumes will attract browning thereby sparing planted seedlings
5.3.0.0		DEVELOPMENT AND EVALUATION OF A FOREST WATER BALANCE MODEL (E.P. 855)	Vancouver Island	Ministry of Forests Research Branch - A.T. Black	As in title

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
5.3.0.0		SOIL WATER REGIMES ON A FORESTED SLOPE (E.P. 902)	?	Ministry of Forests Research Branch - D.G. Giles	As in title
5.3.0.0		UPPER PENTICTON CREEK EXPERIMENTAL WATERSHED STUDY (E.P. 956)	Okanagan	Ministry of Forests Research Branch - J.D. Cheng	As in title
5.3.0.0		RAIN-ON-SNOW HYDROLOGY IN THE QUEEN CHARLOTTE ISLANDS (E.P. 959)	Queen Charlotte Islands	Ministry of Forests Research Branch - D.J. Wilford	As in title
5.3.0.0		ESTIMATING PEAK, LOW AND ANNUAL FLOWS FROM UNGAUGED STREAMS USING GEOMORPHIC VARIABLES		UBC - Forestry - D.L. Golding	As in title
5.4.0.0		IMPROVED USE OF METEOROLOGY IN FORESTRY (PC-46)	B.C. & Yukon	Can. Forestry Service: PFRC - R.H. Silversides	To apply meteorology to solution of forestry and environmental problems; to develop climatic simulation model
6.0.0.0		EFFECTS OF HARVESTING AND SITE PREPARATION PRACTICES ON FOREST RESOURCES AND VALUES (PC-25)	Southern Interior Vancouver Island	Can. Forestry Service: PFRC	Not specified
6.0.0.0		PHOTOLOGGING SYSTEM	Vancouver	Techwest/B.C. Research - J. Wallis	Automated recording of road conditions, grade, surface, roughness,etc.
6.0.0.0		REHABILITATION OF SEVERELY-DISTURBED FOREST LAND	Vancouver	UBC - Forestry/Soils - T.M. Ballard	To develop, test and analyze rehabilitation methods
6.0.0.0		PRODUCTIVITY TRENDS IN COAST LOGGING		UBC- Forestry/NAHS - D. Haley	
6.0.0.0		ENVIRONMENTAL EFFECTS OF ESTUARINE LOG STORAGE	Fraser River Estuary	Westwater Research Cntr. - D.A. Levy	Comparison of juvenile salmon and be thic invertebrate abundance in the P Grey log storage area and marshes

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
6.0.0.0		ENVIRONMENTAL PROBLEMS FACING FISHERIES AND MARICULTURE IN B.C.	Coast of B.C.	Westwater Research Cntr. - Diana Vallela	To set priorities and to develop responses to fisheries and mariculture conflicts
7.0.0.0		DEVELOPMENT OF ECONOMIC GUIDELINES FOR ALLOCATING RESOURCES FOR FOREST MANAGEMENT & RESEARCH (PC-05)	Victoria	Can. Forestry Service: PFRC - G.H. Manning	To provide economic advice and policy advice to CFS/PFRC management & staff and to public & private clients
7.0.0.0		ECONOMIC RECOVERY OF "WASTED" WOOD		MacMillan Bloedel - P.L. Cottell	
7.0.0.0		CONTINUATION OF A SURVEY OF Q.C. METHODS IN THE FOREST PRODUCTS INDUSTRY IN B.C.		UBC - Forestry - L. Valg	
7.1.0.0		ENERGY FROM THE FOREST (ENFOR) (PC-53)	B.C. & Yukon	Can. Forestry Service: PFRC - G.H. Manning	To quantify and evaluate the forest biomass available for energy conversion; to assess impacts of its use
8.0.0.0		STUDY ON ESTUARY AND FORESHORE USE		Ministry of Forests Engineering Branch/ COFI/FERIC	Present and future use of foreshores
8.0.0.0		CARNATION CREEK	West Coast Vancouver Island	Fisheries & Oceans Biological Station - G. Hartman	Multi-year study of effects of logging on the fish resources of a small coastal stream
8.0.0.0		FISH/FOREST INTERACTION PROGRAM	Queen Charlotte Islands	Fisheries & Oceans Pacific Region - V. Poulin	Investigation of effects of steep slope logging on terrain and stream stability and fish resources
8.0.0.0		ESTUARINE RECOVERY	Nanaimo River Estuary	Fisheries & Oceans Biological Station - T. Brown	Rate of natural recovery of estuarine fish habitat after discontinuation of long-term log storage
8.0.0.0		HABITAT CREATION AND MONITORING	Campbell River Estuary	Fisheries & Oceans - M. Brownlee	Creation of islands of intertidal habitat in an area previously degraded by log storage and handling

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
8.0.0.0		LANDSCAPE DESIGN AND REGIONAL PLANNING ASPECTS OF LAND RECLAMATION IN THE HIGHLAND VALLEY REGION	Kamloops	UBC - Forestry - J.V. Thirgood	
8.0.0.0		THE DESIGN OF POLICIES AND INSTITUTIONS FOR MANAGEMENT OF COASTAL RESOURCES	B.C. Coast	Westwater Research Cntr. - A.H.J. Dorcey	To evaluate improvements to policies governing the major sectors using coastal resources
8.1.0.0		RURAL RECREATION MANAGEMENT PROBLEMS AND INFORMATION NEEDS, PROVINCE OF BRITISH COLUMBIA	Vancouver	UBC - Forestry - P.J. Dooling	To identify and rank the recreation management problems and information needs in B.C.
8.1.0.0		BRITISH COLUMBIA PROVINCIAL PARKS: RECREATION USE BY THE PHYSICALLY DISABLED		UBC - Forestry - P.J. Dooling	To identify use needs of the disable in B.C.'s recreational areas
8.1.0.0		WILDERNESS RECREATION USE IN THE STEIN RIVER BASIN: INSIGHTS FOR FOREST RECREATION MANAGEMENT	Stein River Basin	UBC - Forestry - P.J. Dooling	To describe the patterns of recreational use in a roadless area, 1979-81
8.1.0.0		VISUAL RESOURCES EVALUATION, BURNABY METROTOWN	Burnaby	UBC - Forestry - P.J. Dooling/	To identify, define and map visual resources in Burnaby planning area
8.1.0.0		RECREATION USE IMPACT ASSESSMENT	Stein River Basin	UBC - Forestry - P.J. Dooling/ I. Sharpe	To establish baseline data on the soils and vegetation of wilderness campsites within Stein River Basin
8.1.0.0		A STUDY OF LAWS RELATED TO OUTDOOR RECREATION ACTIVITIES IN B.C.		UBC - Forestry - P.J. Dooling/ W. Smith	To prepare a handbook of outdoor recreation laws and regulations in B.C.
8.1.0.0		SCENIC FACTORS OF THE BRITISH COLUMBIA COASTLINE - AN EMPIRAL STUDY OF DIFFERENT LAND USE ACTIVITIES AND SHORELINE CHARACTERISTICS	B.C. Coastline	UBC - Forestry - P.A. Miller	To identify and evaluate shoreline features important to people and to resource managers
9.0.0.0		A PROBLEM ANALYSIS IN FOREST CLIMATOLOGY (E.P. 892)	British Columbia	Ministry of Forests Research Branch - W.R. Rouse	To define problems created by or associated with climate and to recommend research to reach solution

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
9.0.0.0		RANGE RESEARCH NEEDS FOR B.C.: A SELECTED BIBLIOGRAPHY FOR RANGE, FORAGES AND LIVESTOCK MANAGEMENT (E.P. 954)	Kamloops	Ministry of Forests Research Branch - B. Wikeem	As in title
9.0.0.0		STRATEGIC PLANNING FOR TSA's	Interior B.C.	Ministry of Forests Planning Branch - (Bullen)	Not specified
9.0.0.0		DESIGNATION OF RECREATION SITES	Victoria	Ministry of Forests Recreation Management - (Lucoe)	Not specified
9.0.0.0		DEVELOPMENT OF ECONOMIC GUIDELINES FOR ALLOCATING RESOURCES FOR FOREST MANAGEMENT & RESEARCH (PC-05)	Victoria	Can. Forestry Service: PFRC	To develop economic bases on which to allocate funds to forestry research and resource management
9.0.0.0		COMMUNICATION (INFORMATION) (PC-32)TO PROVIDE INFORMATION UPON WHICH THE FORESTRY COMMUNITY AND THE PUBLIC CAN MAKE RATIONAL DECISIONS	Victoria	Can. Forestry Service: PFRC - Elaine Teske	To increase the level of awareness of resource and environmental subjects
9.0.0.0		EQUIPMENT REPLACEMENT (9.1)		FERIC - A.W.J. Sinclair	Development of a computerized maintenance record
9.0.0.0		EQUIPMENT MAINTENANCE RECORDS (9.2)		FERIC - A.W.J. Sinclair, M.J. McDonald	Computer generation of individual machine history files
9.0.0.0		MAINTENANCE STRATEGY SEMINARS (9.3)		FERIC - A.W.J. Sinclair	To disseminate information, on request, on maintenance strategies
9.0.0.0		NON-MECHANICAL DELAY ANALYSIS		FERIC - B. McMorland	
9.0.0.0		FLORA LIST FOR COASTAL BRITISH COLUMBIA	Coastal B.C.	MacMillan Bloedel Ltd. - R.C. Bower	Develop a listing of plant species occurring in coastal B.C.

CODE #	Spp.	PROJECT TITLE	LOCATION	PRINCIPAL RESEARCHER	OBJECTIVE
9.1.0.0		IMPROVED METHODS OF EXPERIMENTAL DESIGN (E.P. 926)	Victoria	Ministry of Forests Research Branch - H. Stauffer	As in title
9.2.0.0		AN EVALUATION OF THE INFORMATION FUNCTION OF RESEARCH BRANCH (E.P. 854)	Victoria	Ministry of Forests Research Branch - T.D. Mock	As in title

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